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Energy risks

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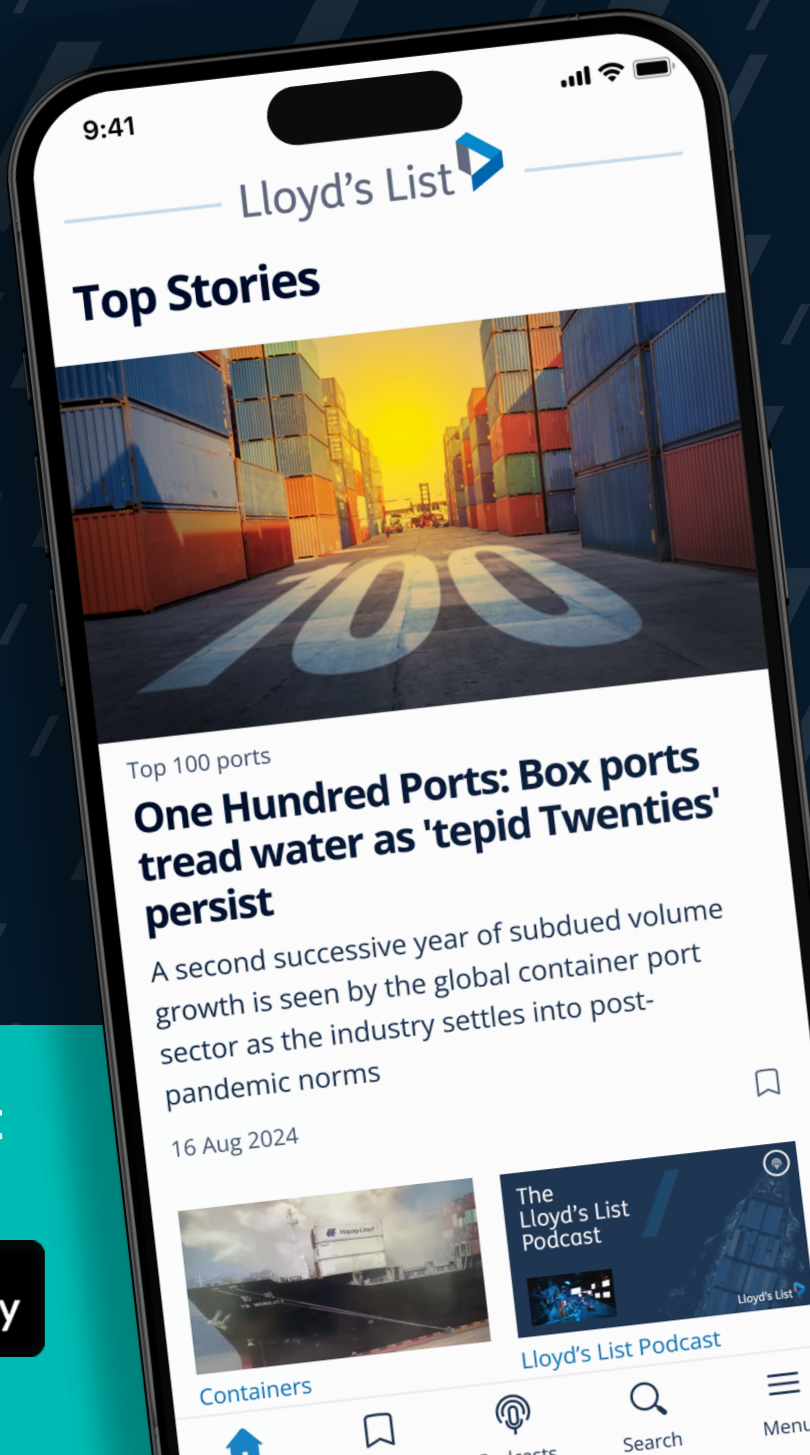

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Energy risks

Energy is a peculiar beast. On the one hand it is essential to all aspects of life and therefore touches everything that needs to be insured. On the other hand, it can and does damage the planet, with re/insurers called upon to clear up the mess. In the jarring contexts of a softening market, extreme weather events and the transition to net zero, re/insurers face energy risks that are increasingly diverse and complex.

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Content editor
Louise Isted

Contributors
Germana Canzi, Francis Churchill, Ben Margulies, Queenie Shaikh

Production editor
Toby Huntington

Sub-editor
Jessica Sewell

Editorial
Insurance Day,
5th Floor, 10 St Bride Street,
London EC4A 4AD
Email: editorial@lloydslistintelligence.com

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Risk, resilience and reinvention: the perils of the global energy transition

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Clean energy growth continues, particularly for solar and offshore wind, while global climate risks intensify. Fossil fuel production also continues, raising issues about the need to reduce emissions globally. The insurance industry thus finds itself at the centre of a high-stakes transformation

The energy landscape of the past few years has delivered a paradox: there has been record-breaking growth in some clean technologies, but this has been accompanied by persistent and even rising reliance on some fossil fuels, *writes Germana Canzi.*

According to the International Energy Agency's (IEA) Global Energy Review 2025, renewables have reached one-third of global electricity generation. Within this, a staggering 400 gigawatts (GW) of new solar photovoltaic capacity was installed during 2024. Wind power also saw considerable growth, with the offshore sector particularly dynamic – growing steadily over the past decade at an average annual rate of 10%.

China is the absolute market leader for cumulative offshore wind installations, accounting for half the global market share, followed by the UK. As much as 8 GW of new offshore wind capacity was grid-connected worldwide in 2024, according to the Global Wind Energy Council.

Meanwhile, global utility-scale battery storage capacity – critical for the development of many renewable technologies – more than doubled between 2022 and 2024.

The fate of nuclear power has also changed considerably over the past few years. In 2024, there was a 33% increase in the amount of new nuclear capacity brought online globally compared to the previous year – reaching 7 GW. Six large-scale projects reached completion, with two in China and one each in France, India and the United Arab Emirates.

Collectively, these technologies now prevent around 2.6 gigatonnes of emissions annually, equivalent to 7% of global energy-related CO_2 emissions. Without them, the increase in global CO_2 emissions in 2024 would have been three times larger. In Australia, China, the European Union and New Zealand, the deployment of these technologies was even more significant.

Risky business

Yet, despite these milestones, fossil fuels remain deeply entrenched in the global energy system, undermining the speed of transition needed to meet climate goals in the 2015 Paris Agreement on climate change. Surges in electricity demand have boosted the use of coal in some regions. This was driven by heatwaves requiring a boost in air conditioning use, something paradoxically made more likely by climate change itself.

The growth of electricity-hungry artificial intelligence technologies and data centres is also an important and growing factor in electricity demand trends.

Fossil fuel investment remains significant in the US, Middle East and Africa. Yet the IEA estimates demand for these fuels will peak before 2030. This could create a transition risk: the danger that new fossil projects may become stranded assets, saddling investors – including insurers – with potentially significant future losses and reputational damage.

This issue was also highlighted in a report in April this year by the International Association of Insurance Supervisors, which says transition risks for the industry could manifest as a decrease in the value of assets affected by ecological transition and may result in stranded assets, defining these as "sectors that are likely to shrink due to measures taken to transition to a low-carbon economy or to a shift in consumer or investor preferences".

The key trend to watch in terms of where fossil fuel use is going is electrification. More than 15 million electric vehicles (EVs) were sold in 2024, more than 20% of global car sales. China is leading the way in EV technology, followed by the EU and the US. Heat pumps also surged across Europe and East Asia, with sales tripling in some markets between 2021 and 2024.

Insurance: from follower to multiplier?

For the insurance industry, there are emerging risks that relate to the resilience of renewable infrastructure, such as grid reliability and the need for upgrades as some technologies expand.

In addition, there are the potential effects of climate change itself, causing extreme weather events that may cause an insurability crisis in some locations, as well as damage to infrastructure – such as solar farms in severe hailstorms – or affecting wind power reliability and patterns. There are emerging issues for insurers as millions of consumers – and potentially entire logistics businesses in the future – switch to EVs.

Nuclear power insurance, conversely, is still very dependent on state support because of the large potential liabilities. Carbon capture and storage technologies, still largely experimental but rising up the policy agenda, pose new risks in relation to CO_2 leakage, long-term monitoring, and regulatory uncertainty.

Howden has launched the Climate Insurability Framework, which the insurance broker says will help businesses, investors and governments navigate a riskier and rapidly evolving climate landscape.

"We are entering a new era where insurance signals shape economic outcomes," says Rowan Douglas, chief executive of climate risk and resilience at Howden, adding there is a need to embed insurability into transition strategies. This means access to affordable, reliable insurance is fast becoming a defining factor in which projects get built, which companies stay solvent and which governments retain investor confidence.

Other analysts argue, rather than being a reactive player – underwriting the risks the economy is facing and new technologies that are emerging and growing – the insurance sector now has an opportunity to become a proactive agent of change.

"We are entering a new era where insurance signals shape economic outcomes"

Rowan Douglas
Howden

According to Scott Kelly, a member of the board of advisers at the Cambridge Centre for Risk Studies, climate risk is "reshaping our economy in real time". There are early signs of positive steps in the industry, he says, with some insurers and reinsurers restricting fossil fuel underwriting, as well as the European Insurance and Occupational Pensions Authority and the European Central Bank pushing for public-private risk sharing. But, Kelly says, given climate risk is already "disrupting the systems we rely on such as insurance, credit, asset valuation, and public finances", more "systems change" is needed.

Insurers have options. Kelly says they could embed forward-looking climate risks into underwriting, signal future exposures more transparently, drive transition finance to accelerate decarbonisation, redirect investment into adaptation, and much more. It is not just the underwriting of fossil fuel projects that matters, but also where investments go, including what investments are made via asset management firms.

The road ahead

Optimists consider climate change targets embedded in the Paris Agreement as still achievable, but only with rapid and systemic financial reform.

Meanwhile, however, the energy and climate change transition is unfolding in an increasingly volatile era in geopolitical terms, at a time when many key projects are intrinsically cross-border in nature.

In the years since the Covid pandemic, the global energy sector has not merely changed; it is in the process of being entirely redefined and reshaped, under rapidly changing new headwinds, with many competing factors pushing in different directions.

For insurers, this means not just rethinking what is insurable in a world where climate risk is growing, but also considering what part to play in the need to align capital flows with what the science requires.■

Deciphering the energy risk code: WTW's Mackenzie

'There can't be any certainty when we're governed by politicians who are thinking within election cycles, and we're trying to design the energy system for the next 50 years,' argues the global head of Willis Natural Resources

Energy underwriters are caught up in the insurance market's currently bearish sentiment although this looks counter-intuitive from a risk perspective, according to WTW's global head of natural resources, Rupert Mackenzie, *writes Louise Isted.*

"The energy market is something in and of itself, but we operate as part of the broader, wider insurance market and definitely what we're seeing across most lines of business at the moment is a softening in the rating environment," Mackenzie says in an interview with *Insurance Day*.

Mackenzie, whose division now has the branding Willis Natural Resources, leads WTW's Energy Market Review, which is used by insurers, brokers and risk managers to inform conversations with their clients and boards.

"The review enables them to convey the state of the market, helping them to articulate decisions for their internal governance and report-making to their stakeholders, that then sets them up for a successful renewal," he says.

The latest edition of the report, published in April, explores the global upstream, downstream, international liability and North American casualty energy markets.

It describes the "confusing market dynamics" in upstream energy, where prices are softening despite concerns about profitability.

"On the face of it, that's contradictory," Mackenzie says, "because logically you'd expect pricing to stabilise or indeed increase if there's truly a concern about profitability. In reality, the energy insurance market is more complex than that."

He explains underwriters are tolerating softening rates in operations by finding opportunities to bolster premiums in construction, where there has been a marked uptick in activity in the last 18 months. Such has been the push for energy construction work that some insurers told WTW that they had already spent their entire 2025 budget for that sector by April.

"That has led to a contradiction in sentiment because insurers are under pressure to grow their market share. And so, even though there's concern about profitability, at this stage we're not seeing a withdrawal of capacity," Mackenzie says. "For the pricing model to shift, we're going to need to see quite a considerable withdrawal of capacity in the upstream market, and that isn't playing out yet."

The current trend in downstream energy is also counter-intuitive. Since WTW wrote its Energy Market Review, there has been a "considerable number of quite significant downstream energy losses", Mackenzie says, particularly in the first quarter.

He explains: "There was certainly an emerging narrative from some insurers that this might have an impact on the market trajectory of softening rates, but what we're hearing from the June renewals is that, although there were more losses to significant events in Q1 than in the whole of last year, this isn't having an impact on pricing.

"There has been no increase in capacity because the few new entrants there have been, are not large enough to change the market dynamic. It's more a case of incumbent insurers looking to deploy capacity who have a real concern that they're going to see an erosion of market share. They're

"The energy market is something in and of itself, but we operate as part of the broader, wider insurance market and definitely what we're seeing across most lines of business at the moment is a softening in the rating environment"

Rupert Mackenzie
WTW

worried that brokers and clients are going to look to include other insurers on their downstream risks. This is driving some insurers to increase their lines on renewals, which puts more pressure on the signings."

This is leading to a resurgence, he adds, in soft market credits, long-term agreements and no claims bonuses. "Whether they are publicly acknowledging it or not, there is an acceptance by insurers that rates are likely to be on a downwards trajectory for the foreseeable future, and therefore getting as much of a share of risks at the moment will probably position those companies well."

On the liabilities side, Mackenzie sees a "two-speed market". There is capacity and competitive pricing in international casualty risks, but in the US market rates have been increasing for some lines because of social inflation and thermonuclear verdicts – awards exceeding $100m – that are coming through.

"US casualty continues to be the odd one out," he says, "and we don't see that changing because market volatility is creating huge uncertainty for insurers and it's very difficult for them to model their way through that."

Attractive class

Energy is an attractive insurance class because of the potential returns in a profitable year, Mackenzie stresses. Its key characteristic is intrinsic volatility and an insurer's ability to manage that volatility is improving, he adds, but "no model is ever completely right" and every insurer will have a different perspective on an expected level of loss. No matter how highly evolved data becomes to better gauge potential loss activity, he continues, many events come down to a sudden equipment failure or human error, and it is difficult to model for that.

Increasingly detailed natural catastrophe models are being built and are looking at geographies more broadly, rather than as has been the tradition, at specific locations.

"WTW has always been a data-driven broker and as we weave together the various data strands that we have as an organisation, be they from claims or engineering studies or from natural catastrophe models, we are providing a much more holistic analysis of risk," Mackenzie says. "That will be even more important as the world moves increasingly towards a data-led global economy and society," he adds.

The next edition of the Energy Market Review, to be released in November, will assess whether trends are "playing out in the way that we suspect they will be", Mackenzie says. It is too early to judge, but the issue is likely to be, not whether rates are still softening, but rather the pace at which each sector is following that trend, he adds.

Uncertain transition

In its Global Clean Energy Survey, published in March, WTW describes the need for re/insurers and energy companies to bring their net-zero transition strategies into alignment. Mackenzie says brokers and insurers have a critical role to play in that, by protecting the balance sheets of project developers though the transfer of risk to insurance and capital markets.

A barrier to playing that role is the fact insurance products have historically been "siloed" into underwriters who look at construction and those who work on the operations side, Mackenzie says. However, renewable energy underwriters are responsible for both phases, which Mackenzie says enhances a client's arrangements with lenders by enabling them to de-risk the life of a project.

He explains: "These underwriters can work with a client all the way through the early-stage development of a project, through the final investment decision, and then all the way through the construction phase and into the operational period. As brokers, our role is to be the connection point between a project developer and the insurance market, to help the client deliver data-driven insight through the modelling of the project and technology risks.

"Often with these projects, the technology may not be that well proven, and therefore it's very difficult for insurers to truly understand the risks that are being presented to them, because there are no historical data points for them to work off. And so, we as brokers can help to deliver some insight and articulate the data that is available in the best way possible and close any gaps in understanding. That allows the insurer who has an appetite for clean energy business to feel confident about deploying capital."

Insurers who put together "an entire ecosystem" around clean energy risks are going to fare better than those who think only in terms of separate products, Mackenzie stresses. An ecosystem that includes, for example, tax credit insurance, issuing bonds, and environmental impairment liability, dramatically increases an underwriter's prospects of making a reasonable return on that business, he says.

Insuring the clean energy transition is a "long-term bet" on technology development across different geographies, he adds, for the deployment of significant amounts of capital to meet future energy demand and to help governments meet their net-zero targets. However, over the past 12 months, he notes, there has not been much certainty around that ambition and there has been "some retrenchment" of environmental, social and governance goals. It is difficult for insurers to respond to this "ever-changing environment", he says.

Tipping point

In the Global Clean Energy Survey, WTW says the natural resources industry is at a tipping point. What then are the right risk decisions for them to make?

"Oil, gas, chemicals, power, utilities, renewable energy, metals, mining, all of them are under pressure at the moment," Mackenzie says, "which comes back to the challenge of short-term revenue opportunities versus longer-

term decarbonisation and making big bets on technologies and policies."

Some energy companies in North America have announced "substantial losses" over the past six months because they were counting on policies enacted by former president Biden, such as the Inflation Reduction Act, which the Trump administration does not support.

For example, the White House issued a surprise order in April to halt work on Equinor's Empire Wind development off the New York coast, even though construction was already under way and all permits had been secured. In June, the Trump administration reversed its opposition to the project as part of a political deal to revive the Constitution gas pipeline that state regulators had blocked on environmental grounds in 2020.

"There can't be any certainty when we're governed by politicians who are thinking within election cycles, and we're trying to design the energy system for the next 50 years," Mackenzie says.

One certainty about the path to net zero is that it is a "materials transition", he stresses, from one type of raw material to another, and energy companies will need to place a bet on that in a way that maximises returns for their shareholders.

"We're going to be in a multi-polar world when it comes to the energy transition, and I don't think enough focus had been put on the need for energy accessibility and energy security," Mackenzie says. A clear example of this was the impact on the politics of natural gas supplies to Europe following Russia's invasion of Ukraine. This showed how geopolitical events can "derail" clean energy policies, he adds.

"There has been a quiet but very broad awakening that some of the strategies that had been set out didn't really stand up to much testing," Mackenzie says. "And I think that we would have seen an evolution of social and political strategies purely borne out of the need to provide reliable energy to populations and to de-risk those energy supplies."

Strategic thinking

Energy companies are, to varying degrees, moving from a transactional relationship with insurers to a more strategic one, Mackenzie says, as they develop an understanding of risk management, and assess the financial strength required. This means deciding how much risk they are comfortable having on their balance sheet and where they want to transfer the rest, such as to commercial markets, mutuals and captives.

The electrification of societies, he continues, will not rely on any single type of technology to meet the tremendous future demand for additional power, such as for electric vehicles and data centres. This shift, he says, will depend on the extent to which a sustainable grid capacity can be created and the degree of access to resources. Into that mix is the appetite of insurers to be an "efficient partner" for companies engaged in clean energy projects.

Less well discussed by insurers at present is the future decommissioning of renewable energy technologies. "It's a topic that many would like to be swept under the carpet, rather than acknowledge there is going to be a problem with decommissioning turbine blades and other materials. In many cases, we will find ways to repurpose and recycle some equipment, but it's not been seen as a priority up until now," Mackenzie says.

Despite the uncertainties facing energy insurers, Mackenzie says it is important to remember that the sector has lived through many supply-demand cycles, and the currently soft market too shall pass.

"At the macro level, I consider myself very lucky to look after a business that that sits across all the natural resources because it's exciting to see incredible change going on. Artificial intelligence is going to provide tremendous insight and pick up the pace of change within the industry, as data becomes more immediate.

"Energy, in its purest sense, is heavily aligned with geopolitics, and it may be that we are in a different situation from what we've seen over the past 50 years. Whatever path countries, regions and continents go down, insurers will have a significant role to play in de-risking technologies, whether it's battery storage or fusion or whatever else," he says.

WTW has been collecting information on risks for "far longer" than any other broker and has provided the market's go-to repository of energy industry loss data since the 1970s. Mackenzie concludes: "Our access to a wealth of data, which we're harnessing and utilising for client benefit, along with our risk quantification expertise, enables us to help clients navigate through these turbulent times."■

The Empire wind development at South Brooklyn Marine Terminal

© Equinor

Energy markets must focus on discipline and customer outcomes: Markel's House

Markel International's energy lead describes how insurers are navigating competing influences in a transitioning market

Energy underwriters face increasing challenges in maintaining appropriate pricing levels in a market that remains saturated with capital, according to Markel's director of energy, Ben House, *writes Ben Margulies*.

However, in an increasingly volatile economic and geopolitical environment, House says "it's crucial to recognise the market is more competitive, but in a way that maintains discipline so our clients don't suffer over the longer term".

The momentum that began in 2017 appears to have slowed over the past year, House says in an interview with *Insurance Day*, with rates reducing "at a greater pace than expected in 2025" and in some sub-classes even to below where they were at the start of the hard market.

House, who has oversight of the carrier's upstream, midstream and downstream underwriting, says 2017 and 2018 were watershed years, featuring extraordinary hurricane activity affecting general property and reinsurance, plus extreme energy-specific loss activity.

Heightened natural catastrophe activity in those years, together with several high-profile onshore loss incidents, led midstream and downstream insurance providers to hike prices, "to bring the adequacy of their general underlying portfolio in line", House says. It was the catalyst for the market to exceed the losses it was sustaining," he adds.

The "firming" rate trend ended last year, but current pricing is expected to remain "adequate" for the next couple of years – provided underwriters avoid broad-based discounting, House says, warning short-term thinking could undermine long-term stability and certainty for clients.

Capacity versus premium

There is roughly $9bn of global capacity in the upstream energy insurance market, but only $2bn in poten-

Алексей Закиров/Adobe Stock

tial premium, according to House. In the onshore energy market – the midstream and downstream segments, which include pipelines and storage facilities – he says there is capacity of about $5bn, compared with about $4bn in available premiums. However, he says the onshore sector has also seen losses exceed market income in eight of the past 10 years, so "future profitability remains a concern, especially with four notable onshore incidents already in 2025".

Timing is also a factor driving rate increases – at the July 1 renewals, underwriters will have been trying to meet budget targets set last year. "I think there's probably a bit of short-termism in some people's views on budgets, which is definitely not helpful in the long run," House says.

Capacity issues, driven by employing the services of managing general agents, further intensifies competition. The increasing adoption of lead/follow underwriting practices is also channelling more capacity behind certain lead underwriters, exacerbating the capital glut, House says.

Global credit conditions also affect rates by widening or narrowing the flow of capital into insurance. When interest rates were low – as they generally were between the global financial crisis of 2008 and the 2021 to 2023 inflationary spike – investors delved into insurance markets seeking higher rates of return.

Although major central banks did hike interest rates – by hundreds of basis points, in many cases – from 2021 or 2022 onwards, this trend has halted in many jurisdictions. As inflation has eased towards central bank targets, rates have fallen to varying degrees in the US, the eurozone, the UK, Canada and Australia, although they remain relatively high by the standards of the 2010s.

House says enterprises will continue to invest in insurance and energy markets until energy carriers stop producing the return they want. "While pricing remains adequate for now, ultimately, current pricing conditions are not sustainable over the longer term and may start driving out certain capacity," House says, "unless they're offering something different or unique." He continues: "If reductions in this transitioning market turn too quickly and over a sustained two- to five-year period then that is going to make people think quite hard about their involvement in that space."

"While pricing remains adequate for now, ultimately, current pricing conditions are not sustainable over the longer term and may start driving out certain capacity unless they're offering something different or unique"

Ben House
Markel International

Energy insurers do have some cushions. House highlights the cost of reinsurance has fallen in recent quarters and investment income remains healthy. He adds unlike some property insurers, most energy carriers have so far made little use of alternative reinsurance capital such as insurance-linked securities, partly because these mechanisms "typically offer no reinstatements after the first event, which restricts their utility in multi-event scenarios and their cost against readily available conventional reinsurance solutions".

Markel's energy offering

Markel's energy practice encompasses most stages of oil and gas production, processing and storage. The company established a separate renewable energy division in 2020.

"We like to lead throughout the energy sphere and are offering something different now with our fast-follow capabilities," House says, by offering insurance and reinsurance on its own Markel company paper and through its marine and energy syndicate 3000 at Lloyd's. Markel's energy practice has three major hubs – London, Singapore and Dubai – but each of these can write cover for assureds in any region with their single platform approach, "wherever the clients need us", House stresses.

"We positively look to get closer to our clients and their evolving risk requirements and see this as the most important and effective strategy as our insureds navigate their own business challenges," he says. "We partner with assureds, not only to mitigate loss, but to strengthen resilience and unlock long-term value in an increasingly volatile risk landscape."

For energy insurers, overcapacity is the major short-term issue. For their clients, the threats are manifold and intensifying, although not necessarily unfamiliar. "Natural catastrophes – such as hurricanes, wildfires and earthquakes – are among the most significant threats, capable of triggering widespread, multi-asset losses," House says.

Oil and natural gas producers and distributors are taking the lead in the energy transition, "vastly contributing to investment in green technology and energy supply, but they too face climate-related risks and losses". From new technologies and evolving regulatory frameworks to emerging liability exposures, "we're here to help assess that risk", he says. On top of this, he adds, are geopolitical and terrorism risks affecting energy firm, particularly those operating in conflict zones such as the Persian Gulf, the Niger Delta and eastern Europe. ■

Lloyd's seeing 'big uptick' in oil and gas clients: IQUW

IQUW's lead energy underwriter, David Message, discusses the outlook for the carrier's upstream property/control of well portfolio

The energy insurance market is stable and has enjoyed continuity in capacity and appetite over the past few years, according to David Message, lead energy underwriter at property and specialty re/insurer IQUW, *writes Louise Isted*.

That is true, he says, for everything from physical damage and control of well through to business interruption; and also for all the different types of company within the energy market, from drilling and construction through to operating and decommissioning. Matched with that is a tried-and-test portfolio of wordings clients can purchase.

"There has also been a fairly stable pricing environment on the upstream side, which has given security to oil and gas clients that are coming into the market to buy insurance. Overall, it's a good place to be," Message says in an interview with *Insurance Day*.

A lot of IQUW's clients are going through changes with the transition to net zero. Their diversification efforts include looking to change how they power their offshore platforms using green energy, as opposed to power on board the platforms fed by hydrocarbons. There is also the introduction of more carbon capture within the existing fields and geothermal activities, for which interest is growing in North America and is something IQUW is looking to provide solutions for.

Oil and gas companies are also expanding in terms of the introduction of new geographies, among them being Guyana, which the market and IQUW are "looking to assist", Message says, in terms of the drilling, construction and operating environments.

Geothermal projects are mainly concentrated in a few geographies, including New Zealand, Indonesia and eastern Europe. The experience for insurers in the geothermal world has historically been difficult with regards to losses, Message points out, but underwriters can differentiate between the companies drilling and producing from those wells, and Lloyd's has been very good at doing that.

"Now, we are seeing an increase in geothermal activity in North America, which we at IQUW are looking to provide solutions for because we have the right mix of underwriting and engineering expertise, including a sub-surface engineer skilled in drilling wells and production wells both for hydrocarbons and geothermal," he says.

Now is a good time to insure geothermal wells, he adds, because of demand for cleaner power generation as an alternative to hydrocarbons.

London and Lloyd's are "undoubtedly" the centre of upstream hydrocarbon insurance, Message stresses. There are some other hubs around the world – in the Middle East, Far East and Scandinavia – but most business comes to London and Lloyd's plays a key part of that, both in providing capacity but also leadership in the oil and gas sector.

The importance of Lloyd's and the London market is growing further, he continues, and there has been a big uptick in the number of clients and the amount of activity in the oil and gas sector. "Considering the geopolitical situation, it's no surprise Lloyd's continues to play a key role in being able to cater for the needs of those clients," he says.

There are two big reasons for that. First of all, Lloyd's is a known brand with consistent market-leading ability on quotes, products and paying claims. Second, it has strong S&P Global and AM Best credit ratings. Message says: "Foreign markets have followed Lloyd's lead for a long time but when times turn difficult, as they have done recently, there is an even greater flight to quality."

Frontier of developments

The oil and gas business is always at the frontier of developing new technologies, Message says, which includes being able to operate in certain water depths or in certain sub-surface structures.

"What we are seeing from a technological viewpoint is a continuation of companies wanting to exploit hydrocarbons either at a deeper water depth or on a deeper producing horizon. That includes vertical drilling to new deposits and, increasingly, horizontal drilling in existing fields," he says.

Almost all oil- and gas-producing nations are looking to expand their upstream business, notably South America, North America, north and west Africa and Asia. In Europe, the only country not following this trend, Message highlights, is the UK.

IQUW does not have a policy against insuring new oil and gas projects

"Considering the geopolitical situation, it's no surprise Lloyd's continues to play a key role in being able to cater for the needs of those clients... Foreign markets have followed Lloyd's lead for a long time but when times turn difficult, as they have done recently, there is an even greater flight to quality"

David Message
IQUW

and sees its role as supporting its existing customers on their energy transition journey.

"One of the things you mustn't forget as an insurer is we are a service industry and that includes helping our clients to minimise their effects on the environment," Message says. And that service is within the guard rails of Lloyd's restrictions as well as the governance and regulatory control over clients, he adds.

An example he gives is IQUW's support to insureds working in the Middle East, which are looking to covert power supply to their oil and gas platforms from diesel hydrocarbon fuels to renewable energy. That re-electrification effort includes insurance solutions for laying new power cables.

"There are very few clients we deal with that are looking to increase their carbon footprint," Message stresses. "Whenever we speak to our clients, we raise this issue and so do they. The only thing that differs between clients is their pace of change."

IQUW's new phase

IQUW has entered the next phase of its energy offering, with three new appointments: senior energy underwriter, Chris Touhey; head of marine, energy and aviation claims, Darren Stewart; and Middle East and Africa engineer, Darryl Krobel. They have joined senior energy underwriter, Chris Jones, and energy underwriter, Teniola Tijani.

"We have three claims adjusters, four underwriters and an engineer, which is everything we need to be a lead market in energy," Message says.

Above and beyond expertise, he adds, is the company's focus on offering its brokers and clients a "quick and constructive response".

"Not all risks are the same, but we always try to find solutions for our clients, whatever the risk they're looking to get insured, and we're working with our brokers and our clients to offer more leadership potential," he adds.

An example of leadership he gives is offering multiple coverages to a client looking to renovate their oil and gas facilities. This bespoke package includes physical damage, loss of profits, construction, liabilities and cargo.

IQUW's energy portfolio has a line size of $100m, up from $60m in 2023. It plans to increase this to $125m next year, subject to company and Lloyd's approval. "It's a trajectory we've been on for the past few years to cater for our clients' needs, in that their values have been increasing in the world of inflation," Message says. "A minimum of $100m is adequate to having leadership capabilities in the energy market," he adds.

Next big thing

The biggest opportunity for the energy market is its constant growth despite the fall in the price of oil over the past few years from $80 a barrel to less than $60. "It's too early to work out whether that will have a long-term effect on hydrocarbon production companies, but at the moment I don't see their growth changing," Message says.

The single biggest risk for energy clients, he says, is the prospect of a downturn in the global economy, particularly since many of them are national oil companies, meaning their profitability relies on their natural resources.

The Trump administration's imposition of tariffs on countries across the world is a definite concern for the market. Message says: "It depends where the client's product is going. Some of what they produce will be refined domestically and the rest will go into the international market, depending on what contracts they have. I haven't seen any immediate impact from tariffs in that sector, but it's not to say there won't be."

Despite its importance to the world economy and its continued growth, the oil and gas sector can seem to be "under the radar" in re/insurance news coverage, which is increasingly focused on environmental, social and governance strategies and renewable energy projects.

"There hasn't been a lot of press focus on hydrocarbons in recent years; however, we've seen growing activity in our clients' businesses. The market – and IQUW – continues to meet these changing demands, servicing our clients on their energy transition journey." ■

Carriers need to rethink energy exposure management

Re/insurers must start embedding energy exposure management into strategic underwriting and portfolio steering, writes **Guy Williams**

Traditional approaches, built on annual roll-ups, static catastrophe models and fragmented reporting across siloed teams, cannot keep pace with the interconnected, dynamic nature of energy risk today. Add to that mounting regulatory scrutiny, tighter controls on natural catastrophe aggregations and the complexity of composite placements across upstream, downstream, renewables and energy liability lines and the cracks are beginning to show, *writes Guy Williams, Ebix Europe.*

Recent events have only underscored the urgency. The Iberian blackout on April 28 – caused by a cascading failure of transmission infrastructure across Spain and Portugal – highlighted just how vulnerable today's energy systems are to systemic, interdependent risk.

Wake-up call for insurers

What began as a localised disruption triggered a cross-border chain reaction, affecting power generation, industrial facilities, and critical supply routes. For insurers, it was a wake-up call: exposure is multi-dimensional, fast-moving and increasingly difficult to model using legacy tools.

The industry often talks about the need for better data, greater collaboration and more sophisticated exposure management, but too often change is slow and innovation is piecemeal. Fortunately, best practice is emerging in the form of dynamic, digital-first platforms that are beginning to shift the paradigm regarding how energy portfolios are monitored, modelled and managed.

Technically, this means automating the ingestion of exposure data (such as bordereaux and engineering reports), refreshing location-level risk profiles on a daily rather than annual basis and integrating third-party hazard data sets (such as windstorm, wildfire or flood models) directly into portfolio views. It also means enabling multi-peril, multi-line analysis of large and complex accounts, often with shared assets or infrastructure, that have historically been treated in isolation.

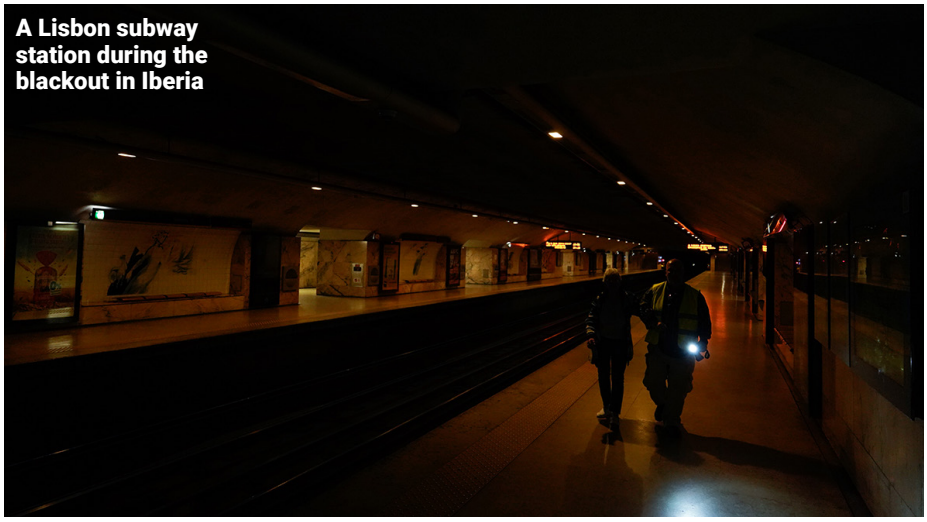
Real-time view of risk

Crucially, modern systems provide geospatial visualisation, allowing underwriters and exposure managers to see proximity, aggregation and clash exposure in real time; whether that is a new offshore wind farm entering a high-hazard zone or a refinery with known vulnerability to wildfire. This empowers a shift from hindsight to foresight and from reactive to proactive risk management.

If insurers and reinsurers are serious about managing volatility and building sustainable energy portfolios, they need to stop treating exposure management as a back-office hygiene task and start embedding it into strategic underwriting and portfolio steering. That means real-time insight, system integration and the ability to connect detailed risk information with executive-level decision-making across the business.

The direction of travel is clear but, as always in insurance, execution is everything. For those willing to lead, the opportunity is not just to improve risk selection and capital efficiency, but also to unlock smarter growth in one of the most dynamic and essential sectors of the global economy.■

Guy Williams is exposure subject matter expert at Ebix Europe



A Lisbon subway station during the blackout in Iberia

Adri Salido/Getty Images

Cargo underwriters face greater challenge than conflict

Yellow Boat/Adobe Stock

RSA's senior cargo underwriter says insurers are well versed in geopolitical risks and capacity continues to enter the market regardless

The marine cargo market is dealing with a perfect storm of falling rates and an unprecedented geopolitical situation, *writes Francis Churchill.*

The market is no stranger to rough waters, however, having dealt with the impacts of Russia's war in Ukraine, Israel's conflict in Gaza and the subsequent attacks by Houthi rebels on ships in the Red Sea. The recent escalation of violence between Israel and Iran is but another unwelcome addition to an already difficult shipping environment.

The real challenge for cargo underwriters, however, is plummeting rates, says Richard Landers, senior cargo underwriter at RSA Insurance and co-lead of RSA and Brit's project cargo consortium Build.

The geopolitical situation is unprecedented and does make life more difficult, but the market has a lot of expertise on its side and is well-informed on the risks, Landers tells *Insurance Day*.

The challenge is how this is coinciding with a rapid slide into a soft market and the Baltimore bridge collapse in March 2024, which is one of the largest marine losses ever.

"All of these losses are still not deterring new capacity coming into the market," he says. "Does geopolitical instability affect us? Yes, it does. But we're still in a situation where people want to quote for these projects.

"This is unprecedented at the moment because we're in a situation of a rapidly softening market, and I would say it's probably one of the quickest softening that I've seen," he continues. "Rate adequacy is a problem in itself at the moment, regardless of what's going on in the world."

Landers's own division, project cargo – which relates to the transportation of large, high-value pieces of equipment – has been somewhat protected from the downward spiral of the general cargo market. Because of its complexity, it is largely insulated from the influx of competitive managing general agents looking for market share and the increasing uptake of automated fast-follow – two of the key factors impacting rates in the wider cargo market.

Rates in project cargo are still af-

fected, but "it really depends on the risk", says Landers.

Risks that involve routes going through or close to areas of geopolitical tensions will command a higher rate, whereas more benign risks in Europe, the UK and, to some extent, the US will attract much lower rates.

Build consortium

RSA and Brit launched their project cargo consortium last year. The Build consortium is jointly led by Landers and Penny Robinson, cargo class underwriter at Brit.

Initially launched with a capacity of $285m for global project cargo risks, including delay in start-up and advanced loss of profits, it increased its capacity to $300m this year.

"We don't want to go any higher than that because we don't see the benefit in putting out much more capacity than $300m. It sits right in the sweet spot for the business that we want to attract, which is that mid-market renewables business," says Landers.

The consortium also writes other project cargo business, such as traditional power infrastructure but is focusing on renewable energy.

Although there was interest in joining the consortium from other insurers, RSA and Brit decided to stay with the same backers for a second year.

In the first five months of this year, the consortium had quoted $8.5m of business, which is "a staggering amount compared to where we thought we were going to be last year", says Landers. Working on the assumption the consortium will bind half of that business, they are on track to meet their budget goals for 2025.

Things are always uncertain, especially with the geopolitical climate, but Build is seeing a steady flow of quoted business being converted into bound policies.

While US president Donald Trump's tariffs did not scupper the consortium's plans for the US, Landers says much of the business there is too large in scale and a better fit for the open market. Where Build is seeing ample renewable energy business is Africa, including South Africa, and the Middle East, including Saudi Arabia.

Green energy evolution

Renewable energy technology is in a different place compared to a decade ago, to the benefit of project cargo underwriters.

Increased production of key components means lower lead times, and therefore less risk of delays if items are damaged in transit and need replacing.

If a wind turbine was damaged in transit and needed replacing, the lead time used to be 12 months because it needed to be built from scratch. But, says Landers, the Chinese state-owned wind turbine manufacturer Goldwind "seems to be manufacturing turbines like cars now... There are just so many of them, which is great for us when it comes to lead times and replacement times."

The picture is similar in solar, where line-driven manufacturing has cut lead times. "It gives us a little bit more comfort in knowing that even if there is the odd incident here and there [clients] are likely to still hit their commercial operations date", Landers says.

This is a key issue for project cargo business, where delay in startup (DSU) insurance – which often covers loss of revenues and the inability to pay back loans – is a large source of potential losses.

The maturation of the technology has helped reduce losses in other ways. Chinese manufacturers are now building solar panels to fit on racks in shipping containers, making them much less likely to break in transit than a turbine blade, which has to be shipped as break bulk on deck.

"China is the largest manufacturer by far of solar panels [and] they've done that over at least a decade. Wind is more of a developing technology – every year you hear there's a new blade that's come out that's a couple of meters longer than the last one and more efficient."

However, wind power technology has reached the point where turbines are almost at the stage of "plug and play", with built-in transformers and inverters.

"The technology is ever-changing, and it's becoming more efficient to build. It gives underwriters like us a bit more comfort in knowing that those lead times are being cut," says Landers.■

"All of these losses are still not deterring new capacity coming into the market. Does geopolitical instability affect us? Yes, it does. But we're still in a situation where people want to quote for these projects"

Richard Landers
RSA

Fac market compelled to follow declining energy rates: Acrisure Re's Cooper

Acrisure Re's head of power international facultative explains why there is enhanced scrutiny of facultative reinsurance purchases

The power and energy market is currently characterised by an abundance of available capacity, as many reinsurers seek to maintain or grow their presence in the sector, says Acrisure Re's head of power international facultative, Ed Cooper, *writes Louise Isted.*

This is occurring within a softening rate environment, leading to increased competition and downward pressure on pricing. Pricing sentiment has shifted accordingly, he adds.

"The facultative market is largely compelled to follow the broader trend of declining rates, with double-digit rate reductions becoming normal," Cooper says in an interview with *Insurance Day*. "These reductions vary depending on specific risk exposure," he adds, "but the overall trend has prompted clients to reassess their spending. Reinsurers now face the challenge of offering more competitive terms than those previously accepted."

As pricing targets continue to decrease for cedants, greater scrutiny is being placed on facultative reinsurance purchases.

"Decisions are now driven not only by price effectiveness relative to the prior year, but also by whether the same level of protection is still required," Cooper says. "Given the ample capacity available, cedants are often seeing reduced orders even when meeting the pricing targets requested," he adds.

Consequently, the need for facultative reinsurance diminishes or disappears altogether, he continues, especially when larger lines are no longer used. This highlights a "shifting landscape", Cooper says, where the traditional value proposition of facultative reinsurance must evolve to stay relevant.

Vertical or quota share

The move towards vertical or quota share placements can be attributed to the market dynamics.

Cooper explains that, in a hard market, completing a placement typically requires a broader mix of capacity and pricing variability. Conversely, in a soft market, increased competition and reduced pricing variance allow for more straightforward placements, which Cooper says naturally leads to quota share structures where markets can participate uniformly.

"While the softening market cycle places downward pressure on profitability, it also creates new opportunities. Some markets, especially those facing reduced or lost shares on traditional placements, are seeking to supplement their participation through facultative reinsurance. Others, unable to secure positions on a non-proportional – layered – basis, are now compelled to consider vertical – quota share – arrangements," Cooper says.

Not all reinsurers are able or willing to engage on a vertical (quota share) basis. To maintain income or preserve a position on an account, Cooper says they may instead offer facultative support on a non-proportional basis. At the same time, while many cedants are under pressure to grow their books – often reducing facultative spending – some are relying on facultative reinsurance, Cooper adds, to enable them to offer competitive vertical or quota share solutions to their own clients.

"Decisions are now driven not only by price effectiveness relative to the prior year, but also by whether the same level of protection is still required... Cedants are often seeing reduced orders even when meeting the pricing targets requested"

Ed Cooper
Acrisure Re

Facultative advantages

The primary advantage of facultative reinsurance over treaty reinsurance is its flexibility to be arranged on an individual account basis. While treaty reinsurance provides protection for an entire portfolio of business, facultative reinsurance allows insurers to secure coverage tailored to specific risks. This enables insurers to selectively cover exposures that fall outside their treaty programme or require bespoke solutions.

An example Cooper gives is that an insurer might use facultative reinsurance to purchase single-peril coverage – such as protection against earthquake or flood – if that is more relevant to the risk in question than a broader all-risk policy.

Facultative placements also offer greater control over attachment points, he adds, allowing insurers to determine precisely where coverage begins for a given risk. In contrast, treaty structures tend to be more rigid, he continues, with attachment points standardised across a line of business.

However, the key limitation of facultative reinsurance lies in the lack of economies of scale.

Cooper explains: "Unlike treaty reinsurance, which spreads cost across a portfolio and benefits from aggregation, facultative placements are negotiated individually. This can make them less cost-effective when considered on a per-risk basis, particularly for smaller or lower-margin exposures."

Top three risks

The top three risks facing the power and energy market at present are geopolitical, regulatory and technological.

Cooper notes how geopolitical risk creates challenges around fuel supply. "One of the largest challenges over the previous years has been the Russia and Ukraine conflict which has subsequently affected gas supplies," he says.

"This as an example has been further compounded by sanctions applied. Overall, the reliability on specific countries for critical fuels both in conventional and renewable energy continues. For example, the extraction and processing of rare earths for renewables," he adds.

On regulatory and energy transition risks, Cooper highlights that challenges related to decarbonisation and renewable energy targets continue to offer market uncertainties. This is compounded, he adds, by the timeframes in place to hit certain regulatory metrics, such as carbon pricing and/or emission standards.

Technology risk is twofold, Cooper says. One is the cyber risk associated with increasingly digitalised grids and infrastructures. More granularly, the fast advancements in technology, both in size and in certain instances prototypical nature, leads to invariable challenges with reliability.

He explains: "Lead times for critical parts for both proven and prototypical technologies is a hugely prevalent aspect for insurers evaluating risks and, linked in with supply chain, can make the most mundane of losses transpire into a significant event."

Message to clients

Acrisure Re's core message to clients in both the power and energy sectors is the importance of maintaining underwriting discipline in the current market environment, Cooper stresses.

"While the pressure to secure full order placements and preserve associated premium income is understandable, this must not come at the expense of the robust coverage required for these complex and high-risk classes," he says.

When it comes to facultative reinsurance, he continues, clients should approach purchasing decisions as part of a long-term strategic plan, not just a short-term reaction at renewal.

"While opting out of facultative protection may yield immediate savings, it comes with significant trade-offs," he says. "Not only is protection forfeited, but reinsurers removed from a placement may be unwilling or unable to re-engage later, potentially at higher cost or reduced capacity."

Although clients are facing growing pressure to maintain placement orders and related premiums, it is critical to implement a long-term reinsurance strategy that can withstand market cycles in any direction. Facultative reinsurance plays a key role in that strategy.

Cooper concludes: "Given the exposure to both attritional and large-loss events in these sectors, volatility cannot be managed by pricing alone and comprehensive protection remains essential."■

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Energy transition syndicate a 'statement of intent' from Axis

Syndicate 2050's active underwriter, Elliot Lyes, discusses the potential of the newly launched syndicate amid the rapid growth of clean energy projects

Axis Capital's energy transition syndicate has huge potential given the rapid projected growth of clean energy and decarbonisation projects, the syndicate's active underwriter, Elliot Lyes, tells *Insurance Day, writes Francis Churchill.*

Syndicate 2050 began underwriting on April 1, 2024 and booked $43.5m in premiums by the end of the year, writing a mix of predominantly property, credit and marine and aviation risks.

The idea of a transition syndicate first came about in mid- to late 2023, as the transition movement continued to gain momentum. Lyes says there was the realisation Axis already had the "key component parts" to underwrite transition risk. The business moved quickly and started underwriting through the syndicate in April 2024.

The speed to market was made possible by the "brilliant" support from Lloyd's, Lyes continues, with the objectives of the syndicate aligning with the corporation's own goal of becoming the market of choice for transition risk. Being a first mover in the space was important for Axis, he adds. "From a personal point of view, it's a real statement of intent from Axis on this particular journey."

Lyes (pronounced Lees) has been in the market for 30 years, the past eight at Axis. When he first joined the re/insurer Lyes headed the upstream energy team, but over the past 18 months he has transitioned to active underwriter of syndicate 2050.

In this role he works with Joe Dutton, Axis Capital's energy innovation lead, and together they set the strategy, scope and appetite of syndicate 2050. Dutton also works more broadly across other lines, taking a high-level view of energy transition, working towards both the insurer's aims and the aims of its clients.

Cornerstone business lines

For Axis there are three cornerstone lines of business for transition risk: construction; credit; and renewables. Towards late 2023, the top priority was to bring those three lines together internally to create a "seamless, tailored approach" for clients. Once this had been decided, the creation of a syndicate was the next natural step, Lyes says. "A syndicate is a much bigger proposition than just an internal team," he says.

"Tying [these lines of business] together internally and putting a ring around energy transition means this, as a journey for Axis, gets seen at the highest level corporately. It's really important to Axis corporately that we are involved in helping our clients transition from where they are towards a net-zero future."

By choosing these three lines as the pillars of the syndicate, Axis hopes to be able to provide cover throughout the life of transition projects – starting with protecting the investment through credit or political risk policies, through to the construction phase – which can include construction policies, offshore construction and project cargo among others – on to the running and maintenance. Axis also writes "associated policies", such as cargo, accident and health and cyber.

"Sitting down and speaking to some of our higher-profile clients, the feedback we were getting is they want their carriers to look at the full suite of not only insurance products but also the ability to mitigate risk across their full suite of assets," Lyes says.

This mix becomes particularly helpful when dealing with more complex projects where multiple lines of business can come together to create a single package for a client,

"Sitting down and speaking to some of our higher-profile clients, the feedback we were getting is they want their carriers to look at the full suite of not only insurance products but also the ability to mitigate risk across their full suite of assets"

Elliot Lyes
Axis Capital

with the syndicate offering a single point of introduction, Lyes says. "Joe and I would certainly be looking at handling some of those larger products and projects internally across those multiple lines to make sure there is a seamless approach for our brokers and our clients."

Every business is at different point on its net-zero journey, Dutton says, so while construction, credit and renewables form the bulk of activity, the syndicate is deliberately broad in terms of business lines it writes. "It's broad, reflecting how the energy transition is more than just generating electrons from renewables," he says.

When it comes to deciding whether a specific risk should written by syndicate 2050, Lyes says the syndicate has a broad underwriting appetite. Anything that looks to displace, replace or reduce energy emissions can be defined as a transition project and sometimes clients specifically ask to be considered for syndicate 2050.

"We try to flex [our underwriting appetite] with the industry, because it's quite a fast-moving pace on the transition side," Lyes says. "You've got new technology, new activities; to try to keep abreast of those has been a great challenge to embrace."

Dutton stresses syndicate 2050 is "not a renewable syndicate or a net-zero syndicate. It's about transition". He continues: "Different insureds are starting from different perspectives, but as long as what we're seeing is the activity or the asset [being insured] is making a meaningful contribution to emissions reductions through replacement or displacement of fossil fuel consumption, we will put that in. And it's on us to be able to determine whether we think that meets our criteria."

In 2024, nearly half of syndicate 2050's book was property business, with credit and political risk and marine and aviation making up the bulk of the other half. The syndicate also wrote some terrorism and professional lines.

Diversification

In 2025, the syndicate is looking to diversify. The plan is to achieve a more balanced split across the three main lines, with 30% credit and financing, 30% renewables and 25% on construction business; other associated classes are expected to make up the remainder of the book.

To date, the syndicate has written a range of business, including some unexpected lines such as fine art and specie. "When we first planned, there was no expectation we'd see any fine art and specie risks," Lyes says. However, precious metals – important in things like the catalytic converters used in most cars to strip out toxic gases and pollutants from exhaust fumes – are increasingly being insured through the syndicate.

"We're very proud of what we've achieved in year one... but there's a huge amount of potential out there and the syndicate's in a great position to be able to take advantage of that to provide what's needed"

Joe Dutton
Axis Capital

The syndicate has been involved in a European carbon capture and storage (CCS) project, writing several lines including credit, onshore and offshore construction and terrorism. Syndicate 2050 has also covered hydrogen projects that, like CCS, cut across traditional silos. "These clean energy projects are complex and they go horizontally through energy, construction, renewables and upstream. They're complex pieces of engineering and they don't fit neatly within one single business line," Lyes says.

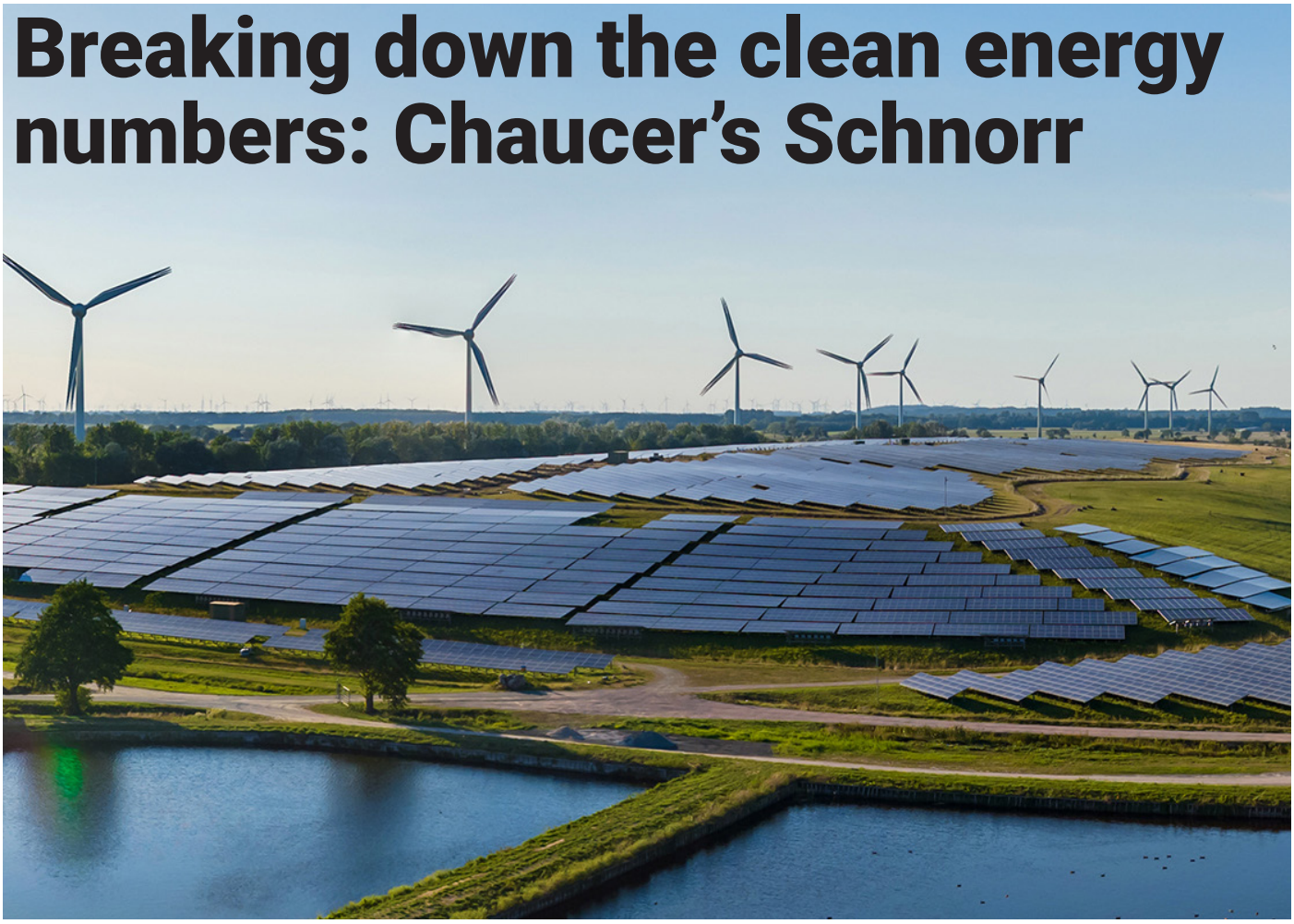
There is also a lot of capital going into new projects outside the European and North American markets, where the investment and risk landscape can be very different. "That's good to see there is this change in balance of where a lot of the activity is. That matters for the transition, particularly with the displacement of fossil fuel. We're seeing this in growing economies where they would perhaps be constructing fossil fuel energy assets, they're moving into clean energy and renewables first," Dutton says.

The direction of travel is clear, Dutton says, with more than $2trn invested into clean energy projects globally last year. "That's a lot of investment that requires a lot of insurance."

He continues: "The syndicate itself is almost just the beginning." The transition is not standing still and innovative technologies are continuously being developed and deployed at a faster rate even than earlier phase of the transition. "The speed at which the transition is moving means that we're having to be very nimble in this space.

"We're very proud of what we've achieved in year one... but there's a huge amount of potential out there and the syndicate's in a great position to be able to take advantage of that to provide what's needed."■

Breaking down the clean energy numbers: Chaucer's Schnorr



snapshotfreddy/Adobe Stock

Specialty group's head of marine and energy, Simon Schnorr, outlines how the role of re/insurers must expand to support the energy transition

The size of investment needed to fund the global energy transition is "staggering" and requires insurers to become comfortable with the breadth of coverage this entails, according to Simon Schnorr, head of marine and energy at Chaucer, *writes Louise Isted.*

The International Energy Agency estimates that to avoid the greatest impacts of climate change and achieve the 1.5°C global warming scenario limit the Paris Agreement set in 2015, global investment of around $150trn will be required to transition technologies and infrastructure in the period to 2050, equivalent to $6trn a year. Of this, $73trn is expected to be spent on electrification, the production and direct use of renewable technologies and carbon removal.

In the power generation sector, it is expected $61trn will be needed to move the sector towards renewables including power generation capacity and upgrades to infrastructure.

"The numbers are staggering when it comes to the energy transition and the work required to ensure this is achieved in the necessary timeframe is significant," Schnorr says in an interview with *Insurance Day.*

"Huge opportunities to transform often go hand-in-hand with challenges and ensuring manufacture of critical components keeps up with demand, without compromising on quality, is going to be crucial in ensuring our ambitions are realised," he adds.

Reinforcing its data-driven approach to accurately monitor aggregations at lay down yards, bottleneck substations and catastrophe hot-spots, as well as understanding and limiting, where possible, contingent time element exposures, will be part of Chaucer's strategy to successfully manage this sector's growth.

"With so many technological advances we often see upgraded, bigger, 'better' tech, which can encounter problems not immediately foreseen or indeed factored into a prudent rating, so we need to be comfortable with the breadth of coverage being offered in these instances," Schnorr says.

The specialty re/insurance group's energy underwriting division encompasses products across the sector, from its exploration and produc-

tion team, who support clients across both construction and operational risks, upstream and midstream, to its renewables offering, which includes onshore and offshore wind and solar, batteries and hydro at any stage of project development.

The energy market is currently favourable for buyers, Schnorr says, and there has been a steady downwards rate momentum across most classes in the sector, driven by new capacity and compounded by the growth ambitions of incumbent markets.

Pivot to dominance

As renewable technologies pivot from being minority projects to dominance both on- and offshore in the coming decades, significant movement of materials will be required as components and machinery move from production countries to the four corners of the globe, Chaucer said recently.

This growth in cargo needing transportation will be paired with storage requirements growing, likely for significant periods of time, "creating a boom" in project cargo.

Given the nature of infrastructure projects and the materials used, which are often stored outdoors, such projects may also increase exposure in ports and sites such as solar farms, to ever more extreme weather, Chaucer said.

Ports themselves will need to prepare for the growth in movement of cargo and specialist vessels, it said, just as fossil fuel terminal usage changes over time.

Citing Modor Intelligence, Chaucer said the current projection for the next five years of shipbuilding is an approximately 25% growth as modernisation of technology and automation take hold.

The likelihood beyond 2030 is that this will grow once again, it stressed. Even for renewables, highly specialist installation vessels will be required for offshore projects, and many existing vessels may need refitting.

To enable acceleration of such projects, insurance capacity and capabilities must increase accordingly, and so Chaucer is investing in human and technological resources to ensure its staff have the expertise and data that will be critical.

New expertise

In May, Chaucer announced the appointment of Jordan Ray as head of renewable energy and energy transition. Ray, who joined from The Fidelis Partnership, where she was head of renewable energy, is tasked with spearheading the development of Chaucer's underwriting strategy for the renewable energy portfolio.

"Jordan will be building on the solid foundations laid in the last couple of years where the focus was to strengthen relationships with key broking partners and clients and better understand the risk landscape attributable to these newer technologies," Schnorr says. "Our intention is to emulate what our exploration and production team does so well and, with help from our world-class engineers, become the go-to lead market," he adds.

The energy transition, he stresses, is "one of the most exciting" parts of the re/insurance market.

"While we have seen a real variance across the market of how teams are defining energy transition and what this might encompass, there are certainly opportunities to provide innovative solutions for clients across a broad range of exposures," he says.

"This could be a solution to a coverage gap for an existing technology where the client is not comfortable retaining a certain exposure, but it is not the market norm for coverage to be included under a typical contract, or it could be an entirely new tech or product that is in its infancy and the challenge is to work with key stakeholders to develop a proposal that works for both parties."

The trick is to remain curious, Schnorr says, and ask questions of the subject matter experts.

He concludes: "Along with Chaucer's partnerships and innovation team, we will be working closely with our existing client base as well as new client segments to develop solutions that will aid and assist them in further facilitating their own specific, as well as the wider energy transition journey."■

"Huge opportunities to transform often go hand-in-hand with challenges and ensuring manufacture of critical components keeps up with demand, without compromising on quality, is going to be crucial in ensuring our ambitions are realised"

Simon Schnorr
Chaucer

US politics poses latest threat to wind energy: McGill's Sexton

'The development of new offshore wind projects in the US is pretty much dead for the next four years,' McGill and Partners' head of renewables, power and energy, Tom Sexton, says

Credit risk, political risk, technology risk, supply chain risk and sabotage risk are conspiring to create an ever more challenging environment for the development of wind energy projects, according to Tom Sexton, head of renewables, power and energy at McGill and Partners, *writes Louise Isted.*

In an interview with *Insurance Day*, Sexton says the re/insurance broker is advising its clients the risk environment has changed "quite dramatically" in the past 24 months.

None is as dramatic, however, as the sudden changes in the US, where Sexton says wind energy developers are "battling against some very strong negative currents politically". Nevertheless, before Donald Trump began his second term as US president, the industry was already seeing delays, postponements and cancellations globally.

Growing list of risks

New technology coming to the market, including improvements to existing technology, creates work for re/insurers, Sexton says, to ensure those additional risks are "protected correctly".

"There's still continued development in technology for both on- and offshore wind assets, but I sense a slowdown in the race for scale and size," Sexton says. "There have been some issues with the larger onshore wind turbines, for instance, and I think some of the major manufacturers are looking to solve them."

For example, there have been some serial issues with onshore wind turbine generators of 4 megawatts (MW) and above, he adds, so manufacturers may instead choose to improve the performance of the existing scale of assets they have. Sexton also expects the trend towards bigger scale in offshore turbines to start to "flatten out".

There is also the "big unknown" in the marketplace regarding Chinese wind turbine technology. Sexton says: "Chinese technology itself is, from the insurance perspective, perfectly adequate and insurable. It's more of a political question, a US tariff question, whether we'll see widespread adoption of Chinese wind turbines, both onshore and offshore. There's definitely a cost benefit for doing that, as it stands, and it will be interesting to see how this pans out in years to come."

Supply chain challenges include the significant downpayments on equipment a lot of manufacturers and suppliers are demanding. Sexton says: "There's credit risk attached to that, so we're looking at advanced payment protection-type insurance products to give our clients comfort they can enter into those contracts with the knowledge the credit risk on their suppliers is managed effectively."

Re/insurance has a perennial role to play in helping insureds manage geopolitical risks and wind energy clients are no exception. A notable example is Taiwan, where renewable energy is a "big investment opportunity", Sexton says.

There is also the emerging threat of increasing exposure to sub-sea assets and Sexton says McGill is working on solutions to this new opportunity for re/insurers.

"There is a lot of positive desire to support renewable energy from the state-level perspective, but I think some of the things that have gone on recently have scared a lot of investors away from the US offshore wind sector, particularly international investors"

Tom Sexton
McGill and Partners

US changes

A January 20 directive from Trump ended all offshore wind leasing and permitting pending an investigation into "deficiencies" in the Biden administration's practices, "the consequences of which may lead to grave harm to marine navigation, national security and marine mammals".

This new lack of political will from federal government to support the offshore wind sector has led to a number of "very high-profile" postponements and cancellations of projects, Sexton says. The biggest headline grabber has been Norwegian energy giant Equinor being forced to halt work on its $5bn Empire Wind project. The Department of Interior later reversed its order and Equinor thanked New York governor, Kathy Hochul, for "constructive collaboration" with the Trump administration over the issue.

Other projects might not be so lucky, however. "A lot of people have lost a lot of money developing projects in the US and then cancelling or postponing them, because it's very difficult to get consents and licences and EPAs now," Sexton says. "The development of new offshore wind projects in the US is pretty much dead for the next four years and because of the significant lead time in these major projects that will have an ongoing impact for a number of years to come, unless there's a change of heart in the White House."

He continues: "There is a lot of positive desire to support renewable energy from the state-level perspective, but I think some of the things that have gone on recently have scared a lot of investors away from the US offshore wind sector, particularly international investors. That has had ripple effects around the world to an extent. You would hope it could free up some of the supply chain, which might have a downward pressure on costs for projects elsewhere in the world. I haven't seen that yet."

This trend began before Trump got back into the Oval Office. For example, in November 2023 a pair of US climate change-denying groups notified the federal government of their intent to sue over its approval of Dominion Energy's 2.6 GW Coastal Virginia Offshore Wind project. However, Trump's tariff policy "adds another complication", Sexton says, not least because much of the equipment required for wind power installations, including turbine generators, is imported from Europe.

Rest of the world

Sexton hopes his assumption the UK and Germany will be the growth drivers of the wind energy sector is still correct.

The UK's contracts-for-difference (CfD) Allocation Round 7 (AR7), which is focused on renewable energy projects including offshore wind, is "incredibly important to get some goodwill and some encouragement back into the sector", he stresses. AR7, which opens for applications in August, is seen as crucial for the UK's clean energy goals and aims to procure more capacity than any previous round.

Sexton points to the "good news recently" of the selection of Equinor and Gwynt Glas as preferred bidders for two floating wind farm projects in the Celtic Sea, off the coasts of Wales and south-west England. These projects, part of the Crown Estate's Offshore Wind Leasing Round 5, are expected to each deliver 1.5 GW of capacity, making them some of the largest floating wind farms in the world. The Crown Estate is also working on options for a third site and expects to announce next steps by the end of September.

"These are big projects, which is encouraging, but they now need to go and get consent and see if they can make them commercially viable. We need more good news stories like this and AR7 is going to be absolutely key," Sexton stresses.

Germany is growing "steadily", he adds, with a "solid legislative environment", while Scandinavia and France are "making the right noises" about the future of the offshore wind sector.

In Asia, Sexton highlights Japan and Taiwan. "Japan has been slower than we'd expected, but it's starting to move forward and we will see some new projects coming to market next year, we hope. It's not going to be massive in number, but I think there will be quite consistent build out from next year and beyond," he says.

All in 2026: the Goto floating wind farm, with an initial capacity of 16.8 MW, is expected to begin operations; the Akita Port offshore wind farm, with a capacity of 315 MW, is scheduled to have turbine delivery; the Iwate Kuji offshore wind farm is expected to start construction; and Toshiba and GE will jointly start producing Haliade-X nacelles.

Taiwan's wind energy sector has enjoyed rapid growth, including Ørsted's first utility-scale far-shore wind farms in Asia-Pacific – 900 MW Greater Changhua 1 & 2a.

Sexton believes wind assets under construction will "continue to go forward comfortably", but he is concerned about the future development of new projects. For example, Taipei has withdrawn development rights for two projects that were winners in Taiwan's Round 3.2 auction last summer. In June local media reported Corio/TotalEnergies' 360 MW joint venture Haiding 1 array, and EnerVest's 240 MW Deshuai proposal have had their development offers revoked.

Sexton stresses the geopolitics affecting the outlook of the wind energy sector, such as China's threatening posture towards Taiwan. "In most cases, it's the same investors and developers who are looking at offshore wind farm risks globally and they will make careful decisions about where they spend their money. If they have a choice between north-west Europe and Taiwan then they might make a quicker decision these

days than they would a couple of years ago."

Cost versus revenue

There have also been high-profile cancellations and postponements of UK wind energy projects recently, where inflationary, supply chain and contracting costs have made some of them "more questionable from a commercial perspective", Sexton says. "This is making developers more rigorous about ensuring their return hurdles can be met on all offshore wind projects around the world", he adds.

It has been disappointing for re/insurers that supply chain costs have not eased in the past 12 months. There will be new vessels coming on stream, but they have been contracted already, Sexton points out, adding the turbine supply, offshore contracting and sub-sea cable markets are all "tight".

"These factors are delaying any hoped-for reduction in supply chain costs and to the extent that we're much more reliant on governments setting the minimum returns that are available from their CfD or other types of green tariffs." Sexton says.

"That's where the market is hoping there will be more money available to increase the potential returns from these assets, because the cost reductions have not emerged as hoped and with additional risks from US tariffs and geopolitics, the supply chain will remain quite sticky for the foreseeable future," he adds.

Uncertainty about costs means any continued or accelerated growth will need to be on the revenue side of the equation, he continues, to enable increased margins for the global wind energy sector.

Investor appetite

By and large, there has been no change in the preferred forms of equity and debt financing for wind energy projects. "On the whole, there is still access to capital," Sexton stresses, "but investors will look at risk in the same way developers do, which may instruct where developers focus their attention from a location perspective."

He continues: "I think, because of the turbulent nature and because of the cancellations of certain projects that we've seen in the past couple of years, people are going to be much more selective about where they invest their money, be it equity or debt. And I think they're probably aligned on that."

With this increased sensitivity about how they expose their balance sheets, investors and developers are increasingly rigorous with the due diligence they conduct on projects.

"Ten years ago, people were positively predicting costs would go down and hence they were aggressively auctioning for sites around the world in the belief they would be able to continue to push those costs down to maximise returns," Sexton says. "They've realised in the past five years this was a broken model and people have lost a lot of money. Hence the more rigorous due diligence on development investment decisions and I can't see that waning. If anything, I think it'll become more and more rigorous."

Investors in wind farms that are already in operation may be looking to "farm down" some equity stakes, Sexton continues, whereas in the past these were "sought-after assets".

More optimistically, he suggests the availability of assets and less competition for them may mean a time will come for the market when companies start buying them to create an aggregated portfolio.

Although the types of investor in wind energy projects have not changed radically so far, Sexton highlights the "well-publicised statements" from oil and gas companies looking to refocus on their core business. "Before, there was very much a social and political will for them to

Stefano Tammaro/Adobe Stock

invest in renewables, whereas now it's become more about commerciality, returns and shareholder value," he says.

For example, BP chief executive, Murray Auchincloss, has said the company's previous "too far, too fast" approach in transitioning away from fossil fuels was misplaced and the company will now be "very selective" in its renewable energy investments. This strategic shift involves reducing renewable energy investments more than $5bn annually while simultaneously increasing oil and gas investments roughly 20% to $10bn a year.

Market sentiment

The insurance market for the construction and operation of wind energy projects, both onshore and offshore, is "very soft", Sexton stresses. "There's plenty of capacity and there's lots of competition among insurers, so you can be quite aggressive when setting insurance cost assumptions in capex and opex models," he says.

However, insurers are also starting to experience some quite significant claims in the offshore wind energy sector, Sexton adds.

He continues: "We haven't seen these claims roll through into a hardening of the market because there's still plenty of capacity and demand from insurers to write offshore wind business, but there's half an eye on these significant claim events, which are potentially going to dampen the appetite. At the moment, though, I would say we're in a very soft moment in the market cycle."

Managing general agents (MGAs), particularly in onshore renewables, still account for a "fairly significant" part of the insurer base, Sexton says, adding this is "largely an aggregation play".

At the same time, there are broker facilities capturing some of that market share from MGAs. They include McGill, which in February launched Auton Green to increase onshore renewables capacity for its digital auto-follow facility.

Auton Green enables clients globally to access up to 40% capacity on onshore renewable energy lines, an increase from 20% on other lines written through Auton – the first ever fully digital cross-class auto-follow facility in the Lloyd's market. Auton Green benefits from the financial strength of the Lloyd's market, with participating syndicates that include Beazley, Axis energy transition syndicate 2050 and Munich Re Specialty.

"This helps our partner insurers access a wider distribution channel and spread their risk across as many assets as possible while also providing secure, safe capacity to our clients in a very efficient and quick manner," Sexton says.

Referring to onshore wind coverage, Sexton says insurers have a clear choice to make. "Do they want to be a market leader, a price setter, an engineering partner for clients and all the resources that requires, which will enable them to be relevant in the marketplace, capture market share and reduce signings," he says. "Or do they want to be as efficient as possible in placing that business?"

Offshore wind is slightly different, he adds, because the risks are bigger, the values are higher and the premiums are therefore more substantial.

"MGAs tend to be less relevant in this because most of our offshore wind clients have their own personal relationships with the main insurers that are supporting them across their portfolios," Sexton says. "These projects have a very long term of about six years, although the actual insurance policies may be longer than that to include maintenance protection, so you really need to be placing those risks with entities you know are going to be around, whereas MGAs often change their capacity, which would be a concern for clients given the longevity of the project construction periods."

Modelling risk

McGill's collaboration with Renew Risk has reached the next level, Sexton says, thanks to the risk analytics software-as-a-service provider's recent launch of a typhoon model and an earthquake model for offshore wind assets in Japan.

These are the first and only commercially available catastrophe models designed specifically for offshore wind farms in Japan – one of the most active regions in the world for natural catastrophes. Renew Risk thus now has five models that are bespoke to a region. They are for hurricane in the US, typhoon and earthquake in Taiwan, and typhoon and earthquake in Japan.

Wind power is a growing focus in Japan's decarbonisation strategy, with cumulative capacity increasing an average 20.4% each year since 2000, and further growth expected with two groups selected for the third offshore wind power round in December 2024.

"That's exciting and good timing, as we see Japan's offshore wind developments start to come to market in the next few years. That will help our clients evaluate the natural capacity exposures in Japan and also help insurers, so I think that's a good update," Sexton says, adding Renew Risk is developing its model for other locations around the world.

Their collaboration has filled the gap in bespoke offshore wind catastrophe models, Sexton says.

"People were relying on the traditional property catastrophe models like AIR and RMS and trying to adjust those manually to fit an offshore asset," he says. "We put a lot of work in with Renew Risk, around the actual vulnerability of offshore wind turbine structures to wind and earthquake exposures. And the outputs of that model are robust and give our clients the ability to make decisions about the probability of loss, which we were not able to do effectively when using the existing models."■

Renewables upend traditional models: Beazley's Sheppard

Rapid geographical and technological expansion in the renewables sector is exposing insurers to unfamiliar risks that are reshaping how coverage is structured, Beazley's renewable energy underwriter, Ben Sheppard, argues

Grapefruit-sized hailstones falling on billion-dollar solar installations in rural Texas are just one example of the stark reality facing renewable energy insurers today, *writes Queenie Shaikh.*

According to Ben Sheppard, renewable energy underwriter at Beazley, these instances of large hailstones present exposure levels no engineering solution can reasonably be expected to mitigate.

As the renewable energy sector scales rapidly across increasingly diverse geographies – from the North Sea to the deserts of Saudi Arabia – insurers are confronting risk exposures such as this, which challenge conventional underwriting wisdom. This geographical expansion into previously untested territories is thus reshaping the entire risk landscape for renewable energy insurance.

After more than a decade of involvement in the renewable energy sector through third-party arrangements, Beazley recently established its own renewable energy underwriting team, reflecting the Lloyd's market's growing appetite for direct exposure to that industry.

"We are an underwriting-driven company, so the focus is always on the profitability of every class of writing," Sheppard says. Although data remains limited after slightly more than a year of Beazley directly underwriting renewables, early results appear promising, he adds.

Scaling technology

The expansion of renewable energy projects into new geographies

"If a project is built in a high-hazard area, it's the client's job and the broker's job to try to get the most insurance possible and it's our job as the insurers to price that and decide how much we want to expose our balance sheets to that"

Ben Sheppard
Beazley

is enabled by dramatic technological scaling that extends far beyond weather risks.

"The typical size of a wind turbine 20 years ago was under one megawatt. We're now seeing wind turbines of more than 15 megawatts being deployed, specifically offshore," Sheppard says. This growth in capacity creates uncertainty for underwriters while also making projects economically viable in areas where they were previously marginal.

Sheppard says the race to capture these new markets is creating secondary pressures that compound the geographical risk challenges.

"As the demand rises for renewables, material, infrastructure and projects, there's a question mark over quality, because buyers of these items are price-conscious," Sheppard says.

This concern about quality intersects with supply chain vulnerabilities, particularly the traditional dependence on Asian manufacturing that creates potential security questions for insurers and their clients alike.

These pressures converge most acutely around climate resilience, creating what Sheppard describes as a "really major focus" of Beazley's role as underwriter for the sector. This problem manifests in two converging ways that amplify each other's impact.

Projects are being deployed in areas where historical exposure data provides limited guidance. "There hasn't been historically a lot of measurement of hail in Texas in rural areas. Now, billion-dollar projects are being built in rural areas where that exposure exists, but the hail risk hasn't been particularly well understood," Sheppard says.

Simultaneously, even supposedly well-understood territories are producing unexpected results. Sheppard points to large renewable energy projects in areas of the Middle East, which insurers had

thought were less exposed to weather events, that have in fact produced losses. Whether this reflects changing climate patterns or simply the exposure of previously unmeasured risks, the result challenges traditional risk assessment methodologies.

This convergence poses uncomfortable questions about the fundamental nature of insurance coverage. "If a project is built in a high-hazard area, it's the client's job and the broker's job to try to get the most insurance possible and it's our job as the insurers to price that and decide how much we want to expose our balance sheets to that," he says.

This is driving more nuanced risk-sharing arrangements, involving complex negotiations between all parties – brokers, insureds and their lenders – about appropriate retention levels and coverage limits for renewable energy.

Emerging opportunities

The underlying drivers creating these challenges simultaneously represent substantial opportunities. "All countries, all territories are looking for more energy and renewable energy is part of that," Sheppard says, adding energy security concerns create substantial tailwinds for the sector.

Sheppard stresses the London insurance market is in a "very fortunate position" and is seeing a "global inflow" of business at the moment. At the same time, he thinks the role of the insurer in the renewable energy market is evolving beyond simple risk transfer towards active industry engagement.

"The lessons we learn we can feed back into the industry as well to help facilitate those changes," he says, with loss mitigation discussions with developers being a prime example.

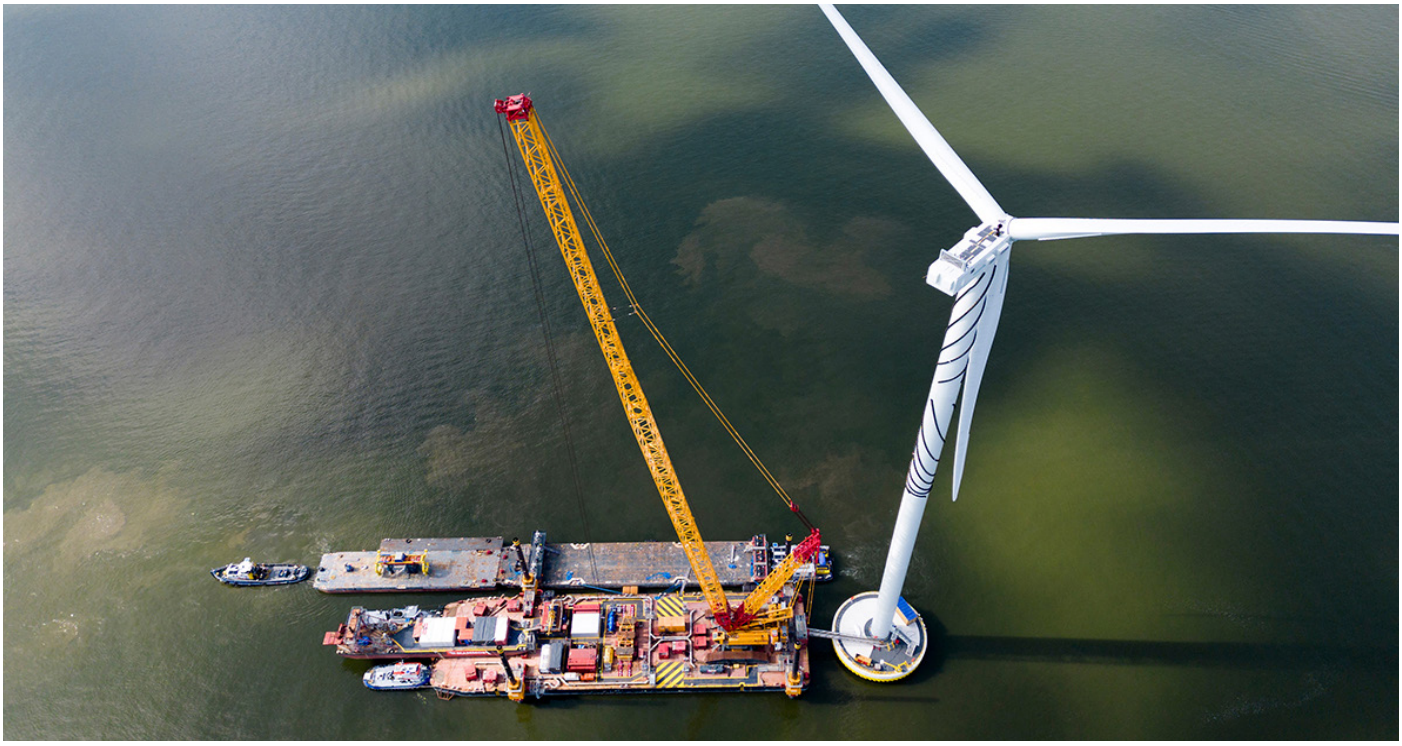
He continues: "Insurance can play a role in helping support the industry as technological solutions are brought in to improve risk management. We can favour good, sound, robust change."

Beazley says it can offer up to $40m of underwriting capacity for onshore and up to $75m for offshore wind. Target clients include those with a strong track record of building and operating large-scale projects with a mature view on risk and its management. Core technologies include wind (onshore and offshore), solar photovoltaic and battery energy storage systems.

Looking ahead, Sheppard anticipates continued technological diversification for insurers to contend with, highlighting emerging interest in hydrogen and carbon capture alongside established wind and solar technologies. Floating wind provides a particularly instructive example. "There have been some successful ones. There have been some where insurers have learned costly lessons, so that sort of feedback loop between insurance and industry really does sharpen the focus," he says.

This evolution suggests a more sophisticated future for renewable energy underwriting, where technical expertise and collaborative industry engagement become as important as traditional risk assessment skills.

Of course, some of the challenges Sheppard mentions are not limited to renewables, but more broadly to any sector insurers choose to underwrite. "We're all trying to turn an underwriting profit," Sheppard concludes, "so we know we must provide cover and choose the terms and conditions at which we're willing to provide that cover. How we do that has to change as the industry we're supporting changes."■



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US severe convective storms pose risk to solar

Severe convective storms are driving record insured losses in the US and posing growing risks to solar farms – innovative mitigation strategies and advanced risk assessments are vital for resilience, writes Ester Calavia Garsaball

In 2024, insured losses from US severe convective storms (SCSs) exceeded $50bn for the second consecutive year, *writes Ester Calavia Garsaball, WTW*.

This category of peril – which includes tornadoes, hail and straight-line winds – has grown increasingly prominent in recent years, posing significant challenges for risk managers across multiple sectors, including energy, agriculture, insurance, construction and transportation.

The 2024 season began at a rapid pace, with 1,264 preliminary tornado reports from January to June – the second highest total for this period since 2010.

This momentum continued into the second half of the year, culminating in 1,855 preliminary reports for 2024, surpassed only by the 2,240 reports in 2011.

Additionally, the year experienced above-average large hail activity – historically the leading cause of SCS-related property damage in the US – with 829 preliminary reports.

Straight-line wind activity also exceeded historical norms, with 16,701 reports, making 2024 the third most active year since 2010.

Storm clouds over solar farms

One sector facing increasing risk from SCS events is utility-scale solar energy – large solar installations that generate electricity for the power grid. This industry has seen rapid growth in recent years, particularly in Texas.

Since 2014, solar energy generation in Tornado Alley and Dixie Alley states has increased by almost a factor of 50, from one terawatt hour to 48 terawatt hours. Most of this growth comes from Texas because of its high solar irradiance levels and streamlined process for approving and building new solar energy projects.

However, as more solar farms are built in storm-prone states, the risk of large losses for farm owners and insurers is increasing.

The risk is heightened by a recent trend toward larger, thinner solar panels, which are more vulnerable to damage.

In March 2024, for example, a hailstorm damaged thousands of solar panels at the Fighting Jays Solar Farm in Fort Bend County, Texas. This event resulted in costly panel replacements and reduced energy output. Insurers anticipated paying out a total loss of $50m, reaching the farm's hail coverage sublimit.

The risk is not just restricted to the central US. In October 2024, an EF2 tornado that spawned from Hurricane Milton tore through a solar farm in central Florida, also damaging 30 homes in the area.

Table: Preliminary tornado, large hail and straight-line wind reports for 2024 and 2010-2024 average

Year	Tornadoes	Large hail (more than two inches)	Straight-line wind
2024	1,855	829	16,701
2010-2024 average	1,355	775	14,959

Source: US Storm Prediction Center

The property insurance market for utility-scale solar has struggled with high premiums and limited coverage availability. These challenges stem from significant losses in recent years and the unique vulnerability of solar panels, which complicates risk assessment.

As a result, utility-scale developers have turned towards improving resilience through engineering design and innovations in tracking technology.

Harnessing resilience

The most significant natural peril loss drivers for solar projects are hail and named windstorms.

The solar panel modules are the primary components that have high vulnerability to windborne debris and hail-related damage, which is dependent on the module glass thickness. While the exposure value of solar modules is project-dependent, they typically account for a significant proportion of the insurable risk.

As a result of the recent increase in SCS loss activity, risk managers for solar projects are increasingly considering a range of mitigation strategies, such as:

- Stowing solar panel modules at specific tilt angles, decreasing the angle of impact for hailstones and reducing the likelihood of wind-related damage; and

- Implementing real-time weather monitoring and automation, automatically initiating protective measures, such as tilting, as storms approach.

New and existing solar projects can also benefit from a comprehensive risk assessment, including geographic and historical analyses of hail, tornado and straight-line wind events.

WTW works with utility-scale solar developers and operators to evaluate and quantify probable maximum losses, considering site-specific engineering design, risk mitigation and tracking system stow strategies for both wind and hail to quantify natural catastrophe risk precisely.

Additionally, understanding how the risk is evolving over time is vital for effective risk management. This is something WTW Research Network partner Columbia University has been exploring.

In a recent research paper, Columbia scientists found tornado outbreaks across the southeastern US had become two to three times more common over the past four decades, particularly during winter and spring.

By combining these risk assessment and mitigation methods into a comprehensive, proactive approach, the solar industry can better prepare for severe weather events and navigate an evolving risk landscape.■

Ester Calavia Garsaball is senior director for physical risk in the climate practice at WTW

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Insurers must offer holistic cover for renewable energy: McLachlan

Serving the $15trn green energy market means dropping the siloed approach to insurance products, Fraser McLachlan, chairman of green transition underwriting business Tokio Marine GX, argues

To capitalise on the growth in renewable energy, insurers need to change their traditional view of products as separate lines of business, according to the chairman of Tokio Marine GX, Fraser McLachlan, *writes Queenie Shaikh.*

Tokio Marine GX is the recently launched green transition business of Japanese insurance giant Tokio Marine.

Global investment in green energy is expected to reach $15trn over the next decade, potentially creating billions of dollars in premiums for insurers willing to adapt their approach.

"The insurance market has been a bit lacklustre in its ability to provide creative ideas and creative solutions to the green transformation space," McLachlan says in an interview with *Insurance Day.* "It is still stuck in those very siloed, very segregated ways of working and it really hasn't moved forward."

McLachlan has worked in insurance since the 1980s and has been directly involved in the renewable energy market for the past 25 years.

He is the founder and chief executive of GCube Underwriting, which was bought by Tokio Marine in 2020 as part of the Japanese insurer's strategy to become a market leader in the green transformation sector.

Complicated coverage

According to McLachlan, renewable energy developers face the challenge of sourcing multiple insurance products from different carriers for single projects. A typical wind farm development requires marine cargo insurance for equipment transportation, construction cover during the build phase, operational insurance once running, plus increasingly complex products such as tax credit protection and political risk coverage. Each product comes from different markets with varying terms, relationships and levels of renewable energy sector expertise.

"The insurance market has been a bit lacklustre in its ability to provide creative ideas and creative solutions to the green transformation space. It is still stuck in those very siloed, very segregated ways of working and it really hasn't moved forward"

Fraser McLachlan
Tokio Marine GX

McLachlan says clients have frequently expressed frustration about navigating this complexity when they simply want comprehensive coverage for their projects.

"I remember trying to explain if you're going to build a project, you need to buy marine cargo insurance and then you need to buy construction insurance... and then you go buy operator and they need to buy liability," McLachlan says. "I remember all these blank faces looking at me and they're like, 'We don't really care how the insurance market works. We're building a wind project. We want you to insure the wind project'."

Through the GX business, Tokio Marine is addressing this fragmentation by offering integrated insurance solutions for renewable energy projects under one roof. The business combines traditional property and construction insurance with specialised products including surety, credit insurance, political risk cover and carbon trading insurance.

Tokio Marine's business units, which previously operated independently, are now collaborating to coordinate existing products and tai-

lor them for renewable energy clients. This approach means looking from the client's perspective to give them what they need to bring their projects to the market.

"They need credit insurance, surety bonds on the construction, physical damage insurance and, in some instances, they're going to need tax credit protection to secure financing from the bank," McLachlan says.

Tokio Marine GX can offer up to $500m on a single risk, a significant capacity commitment to the sector, which McLachlan says reflects both the size of modern renewable energy projects and Tokio Marine's confidence in the sector's growth prospects.

However, McLachlan argues the broader insurance industry continues to force established products on to clients rather than designing solutions for their requirements. The product-centric rather than customer-centric approach by most insurers means the owner of a renewable energy project has to knit together the cover it needs from a range of providers, he says.

The sector's expansion beyond Europe and North America into, for example, China, India and South Africa is adding complexity, he continues, since it creates demand for more sophisticated insurance products, particularly political risk cover.

Banks financing projects in these regions are increasingly concerned about potential government interference, including asset confiscation scenarios. McLachlan stresses political risk insurance is becoming essential rather than optional for projects in such territories.

Political problems

Policy volatility in established markets also presents ongoing challenges. McLachlan points to the uncertainty created by Donald Trump's aversion to the US Inflation Reduction Act introduced by the previous administration.

McLachlan adds government changes typically affect renewable energy projects more than conventional power generation sources, despite the fact the US renewable energy industry employs three times as many people as its coal industry does.

"New governments usually bring with them either more tariffs or less tariffs, more incentives or fewer incentives and that brings more risk to the renewable energy space than it would necessarily bring to the conventional power generating industry," McLachlan says.

Combining existing insurance products is a "deceptively simple concept", he says, that could reshape how the industry approaches renewable energy clients.

This new way of thinking presents a commercial opportunity for Tokio Marine, he stresses, so it is prepared to accept increased risk to support the renewable energy sector's growth. Tokio Marine GX thus aims to give investors and lenders confidence by transferring project risks on to its own balance sheet, an approach McLachlan says can lead to more favourable lending terms and interest rates for renewable energy projects, as well as longer-tenor arrangements from lenders.

Tokio Marine also plans to support newer technologies including hydrogen and electric vehicles, as well as participating in initiatives such as the Lloyd's battery storage consortium. McLachlan concludes GX intends to support, not merely established renewable energy technologies, but the energy transition more broadly. ■

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Renewable energy needs cyber insurers

Renewable energy plants bring a new set of challenges and opportunities for underwriters, Gallagher's head of cyber risk management and director of renewable energy argue

With their unique security challenges and critical infrastructure status, renewable energy projects are a growing new market for cyber insurers, *writes Francis Churchill.*

The commercial implication of events such as the recent string of attacks on retailers including Marks & Spencer, Co-op and The North Face, are already well known, but the size of the prize for bad actors is much larger when it comes to renewable energy.

"The knock-on effect of getting [a cyber attack] right with renewable energy has far deeper consequences that go beyond commercial," Johnty Mongan, head of cyber risk management at Gallagher, tells *Insurance Day*. It is no longer just about lost revenue – although this can be significant – but also about keeping the lights on.

As the transition to net zero continues and these facilities increasingly become part of a country's critical infrastructure network, the opportunity for bad actors is only going to grow. These are different risks from traditional commercial cyber insurance, however, and require a different approach.

"These are engineering assets first and foremost and they paint a different risk profile," Gallagher's director of renewable energy, Carl Gurney, says.

Business interruption

One of the biggest challenges in developing cyber policies for the renewable energy sector has been incorporating sufficient business interruption coverage. No business wants downtime, but for an energy plant the impacts – and the financial penalties – are immediate.

"The key is making sure we're defining the business interruption to respond in the policy in the right way and not as the traditional response to a normal business, which isn't the same," Gurney says.

Renewable energy clients also need more freedom to pay ransoms. While commercial businesses might have other ways to mitigate the damage of a ransomware attack such as by backing up data, if a group of cyber criminals takes control of a renewable energy plant the quickest way of getting it running again could very well be to pay the ransom. In practice, that means fewer sub-limits for ransomware losses.

"I have dealt with a large number of clients who need that facility where there is no restriction [on ransom payments] because, when the stakes are this high, it may be the only option," Mongan says.

Physical cyber damage is also a bigger risk for renewable energy providers than more traditional buyers of cyber insurance, especially when mechanical processes are connected to the internet. Gallagher's clients have highlighted exposure from heating, ventilation and air conditioning systems (HVAC) as one of

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their top cyber concerns because of the physical damage that could occur should these critical cooling systems be interfered with.

"If you can hack into a HVAC system and raise the temperature within a plant to the point at which the equipment starts to fall over, that's physical damage created by security failure," Mongan says.

Many of these systems are connected to the internet, simply because employees need to be able to access them remotely, which raises a host of other security questions about how remote access is managed across a broad range of potential employees, contractors and suppliers. The renewable energy sector is a web of contractors and sub-contractors, so managing remote access to equipment is a unique challenge. "It's a pseudo-supply chain problem, which I think is going to be really attractive to cyber criminals," Mongan says.

Aggregation risk

Then there is the aggregation risk to insurers – a symptom of the emerging nature of the renewable energy sector. Gallagher estimates there are only six core technology providers in the sector at present and the connected nature of the technology makes it relatively easy for a bad actor to find out who is using which provider.

"Attackers only have to get it right with one renewable energy plant and hope all of the other plants use the same technology," Mongan says. If they manage to do this, the same attack can then be used on other plants.

'The key is making sure we're defining the business interruption to respond in the policy in the right way and not as the traditional response to a normal business, which isn't the same'

Carl Gurney
Gallagher

Despites the challenges faced and the learning curve for cyber insurers, Gurney says the capacity and appetite to take on these risks is there – as is the opportunity to carve out a new niche. Because of the complexity of these risks, cover is being bought as standalone policies and not bolted on to other coverage.

Traditional products, such as mechanical breakdown or operational all-risks policies, tend to have very clear cyber exclusions, meaning there is ample room for a cyber product. "There is no grey area, so you can quite simply slot in a separate cyber insurance policy quite clearly alongside those assets," Gurney says.

The renewable energy sector is alert to its security risks. Of the 60 or so firms that have contacted Gallagher for coverage, most have already put in place specific voluntary cyber security frameworks such as the US government's National Institute of Standards and Technology's cyber framework, Mongan says. This shows a level of sophistication in how the sector understands and manages its risks.

Another positive is renewable energy providers are not grappling with legacy technology. "They get the ability to greenfield up a digital architecture that is naturally going to be safer, because it can benefit from some of the [protection] you get out of the box with Azure or Amazon Web Services," he says, referencing two of the biggest cloud computing providers.

Prevention is better than cure and in the same way the insurance industry has helped improve the cyber posture of commercial businesses, there is a similar opportunity for partnership with renewable energy developers. "It's an emerging sector and is only getting bigger and the opportunity for the cyber insurance sector to grow sits alongside that," Gurney says.

Ultimately, he adds, it's also about how the insurance sector can assist the energy transition. "This is another piece of the jigsaw," he says.■

'Attackers only have to get it right with one renewable energy plant and hope all of the other plants use the same technology'

Johnty Mongan
Gallagher

When fact is stranger than fiction

Insurers work with facts, unlike the current leader of the free world. Future readers of the life and times of Donald J Trump will surely regard his aversion to clean energy as the most shocking of all his flaws

Don Quixote de la Mancha lost his mind and attacked windmills. Donald Trump of Mar-a-Lago did the same, *writes Louise Isted.*

Don Quixote thought they were ferocious giants. Donald Trump thought they killed whales, increased the price of bacon and spoilt the view from his golf course in Scotland.

Don Quixote is an antihero because of his ignorance, cowardice and incompetence.

The parallels are uncanny.

Right off the starting blocks, Trump has been taking from renewable energy with one hand and giving to fossil fuels with the other. He who pays the piper calls the tune, after all. (According to Climate Power, "big oil" spent $445m throughout the last election cycle to influence Trump and Congress.)

The executive orders Trump signed in his first days in office eliminated more than 70 of the Biden administration's climate and energy initiatives. The move to interrupt wind project permits is just one example of Trump's prejudice against efforts to reduce energy-related carbon emissions, which the US Energy Information Administration (EIA) expects will increase 1.2% this year.

The most laughable illustration of Trump's relationship with reality must be his suggestion that because rain did not completely ruin his birthday parade on June 14 – as day-ahead weather forecasters had warned it might – then scientists cannot be trusted to predict climate change in the coming decades.

The statue of Don Quixote and Sancho Panza in Madrid

Alex Segre/Adobe Stock

Windmills led to Don Quixote's downfall; literally, when one of their sails knocked him from his horse. Who knows what it will take to knock Donald Trump off his throne. In the meantime, we have Miguel de Cervantes to thank for the idiom "tilting at windmills" to describe attacking imaginary enemies. In Trump's head, wind power is one of them.

It is true Trump cannot take all the credit for the demise of offshore wind in the US. For example, in 2023 Ørsted cancelled its Ocean Wind I & II project offshore New Jersey and in 2024 it withdrew from developing the Skipjack I & II off Maryland. It is also true intermittent wind power alone cannot meet the future demand of gigascale artificial intelligence data centres.

But even Trump cannot be blind to the fact eight of the top 10 states for clean power additions in the first quarter of this year voted Republican in the 2024 presidential election. According to the American Clean Power Association, oil and gas producer Texas ironically leads the nation in clean power, with a portfolio reaching 80-plus gigawatt (GW) – a 20% increase from the first quarter of 2024 – and ranks first in utility-scale solar (28 GW) and land-based wind (43 GW) capacity.

Curiously, the Trump administration's agreement for a further stay in litigation brought by conservative groups the Committee for a Constructive Future and the Heartland Institute against Dominion Energy's nation-leading 2.6 GW Coastal Virginia Offshore Wind array in construction "indicates its willingness to allow advanced projects to continue despite his vow to crush the industry", analysts told the publication *Recharge*.

It is no surprise, however, a gas deal helped save Equinor's $5bn New York wind farm. Trump reportedly reversed his opposition to the project in exchange for state regulators reversing their opposition to the Constitution pipeline – a $1bn project to

carry gas from fields in Pennsylvania to New York and New England.

Under the Biden administration, US emissions fell 1.4% in 2023 compared with 2022, according to the European Commission's emissions database for global atmospheric research. Researchers at the London School of Economics and Political Science warn that under Trump's policies the US could see its emissions rise by as much as 36% in 2035.

This "severe setback for US mitigation efforts", the researchers say, also leads to a greater reliance on fossil fuels, pushing the country's need for imported oil up as much as 31% by the same year. And that means higher household energy bills, not to mention less energy security.

Act of self-harm

Trump's signature second-term domestic legislative package, the One Big Beautiful Bill Act, is as obviously self-defeating as injecting oneself with bleach to kill Covid.

Data centre developers are noticeably quiet on the implications of the bill because no one in the corporate world wants to make an enemy of Trump. Several re/insurers in this report, however, have described the implications of Trump's aversion to renewable energy, both for the US and globally.

The insurance sector nevertheless remains optimistic. In a recent article, Zurich describes the "unstoppable momentum" of renewables. It points out the International Energy Agency expects clean sources like solar, wind and hydropower to meet around 46% of the world's electricity demand in 2030, up from about 32% in 2024.

Meanwhile, Trump's bill will roll back most of the tax credits provided via Biden's Inflation Reduction Act and impose a 50% tax on wind projects and a 30% tax on solar projects completed after December 2027.

According to *The Atlantic*, getting rid of tax credits for clean energy will not simply set back the fight against climate change, but also set the US up for the worst energy affordability crisis since the 1970s.

From 2000 to 2022, US electricity prices rose by an average of about 2.8% a year; since 2022, they have risen 13% annually. But the spike in demand – for data centres, electric cars and air-conditioning units – thankfully coincided with a boom in renewable energy. According to the EIA, 93% of the electricity capacity added to the grid this year will come from a combination of wind, solar and battery storage.

Trump's bill means, however, all wind and solar projects that do not begin construction within a year of its passage or become fully operational by 2028 get no credits. They will cost about 50% more than projects that received them, according to analysis by the Princeton ZERO Lab. The US is effectively raising taxes on the country's main sources of new power at a time when electricity prices are already rising.

Trump chose to proceed with the symbolism he wanted, by signing the bill into law on Independence Day. That is poor taste, even for him, considering the day before deadly flash floods hit Texas. These floods had followed powerful thunderstorms that unleashed torrential rainfall across the region.

As MetDesk wrote in *The Guardian*, the storms were supercharged by moisture from the remnants of Tropical Storm Barry and instability in the atmosphere facilitated by a low-level jet stream. Global warming is expected to increase the likelihood of these events, MetDesk adds, as warmer air can hold more moisture.

At the time of writing, the death toll of the Texas floods exceeded 100 people, including many children.

From shame to shameless, *Politico* reported Trump secured votes for his bill from conservatives by promising a crackdown on renewable energy credits. "We believe the administration is aligned with us on terminating those Green New Scam subsidies. We believe we're going to get 90%-plus of all future projects terminated," Representative Chip Roy (R-Texas) said.

Amid such ignominy, the chief science officer at Gallagher Re, Steve Bowen, nobly suggested via LinkedIn the National Oceanic and Atmospheric Administration (NOAA) cannot do its job as well as it could before it received the Department of Government Efficiency treatment. "NOAA needs to be fully funded/staffed; it [provides] a crucial public service," he wrote.

Critics of the Trump administration have sought to link the disaster to thousands of job cuts at NOAA, but White House press secretary, Karoline Leavitt, rejected attempts to blame the president. "That was an act of God," she told a daily press briefing on July 7. Some in Maga may take issue with that assertion, seeing as, to them, Felon 47 *is* God.

Donald Trump famously likes "winners", but history will record that treating climate change as a work of fiction secured his place as the world's biggest loser.■

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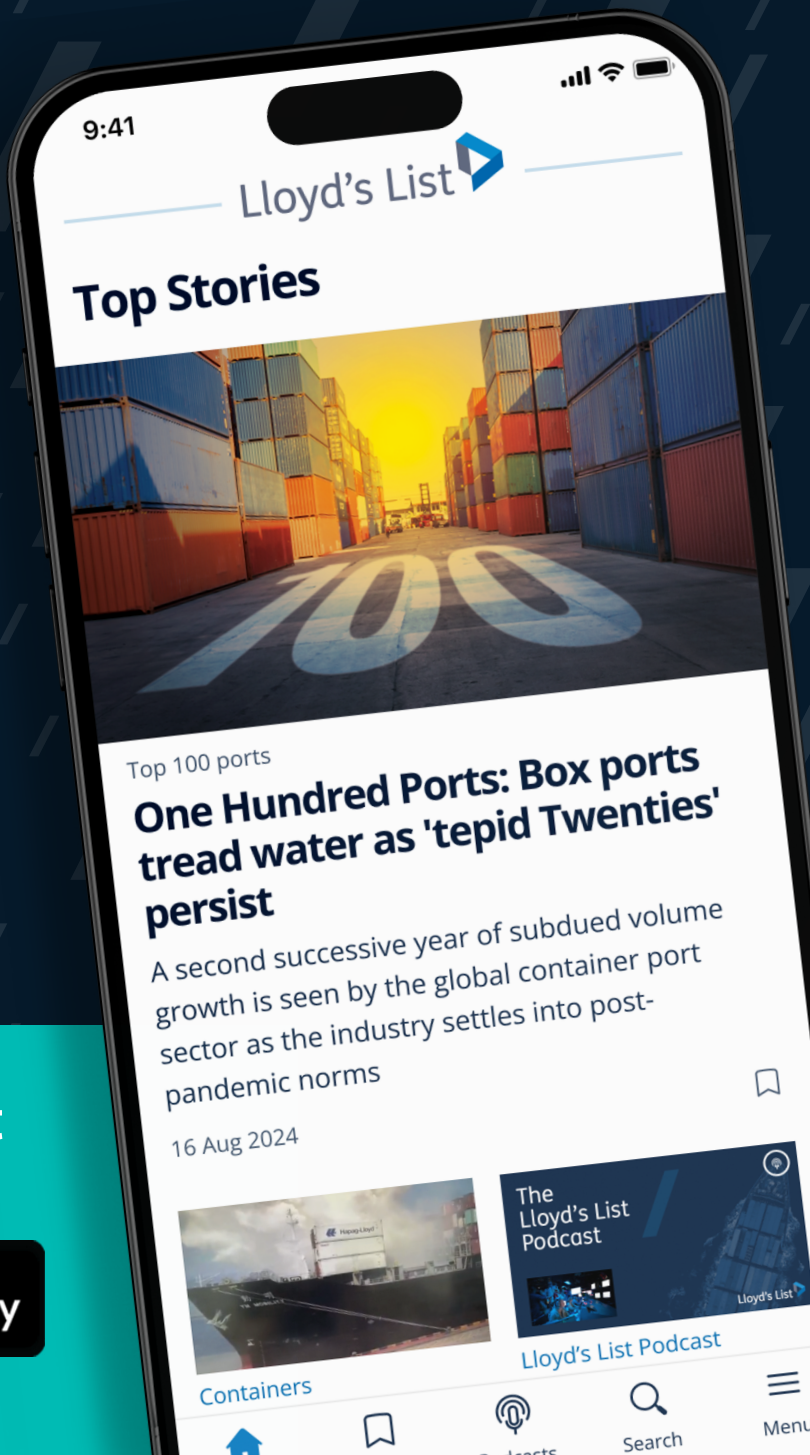

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