

# It's Not Easy Writing Green

How can insurers step up  
to support a resilient green  
transition?

Q4 Report 2025



TOKIOMARINE  
GX

# Foreword

Fraser McLachlan, Chairman, Tokio Marine GX

The renewable energy sector as we have known it is changing. As the green transition gathers momentum, so too do the demands for broader insurance expertise in this sector. Areas such as carbon capture and storage (CCS) and tax and credit surety, for example, are beginning to capture the attention of more and more underwriters in the field. Risks have grown more complex, the number of stakeholders has increased, and the urgency to deliver the green transition is greater than ever.

Underwriting green initiatives is challenging. It always has been. For over 25 years, GCube was at the forefront of underwriting renewable energy risk – from the earliest onshore, and then offshore, wind projects, to the global solar and BESS boom. We learned that the journey to commercial adoption never runs entirely smoothly.

That's why GCube evolved to meet new demands. On 1 September, we announced the official launch of Tokio Marine Green Transformation (TMGX) as a fully operational underwriting business – a transformation that reflects not just a new name, but a wider mission to offer specialist insurance and risk management solutions to businesses looking to decarbonise their operations and unlock new green opportunities.

Founded upon GCube's decades of experience in renewable energy underwriting, with expertise drawn from across Tokio Marine's global operations, TMGX is providing products and services for clients committed to more sustainable practices.

But building a sustainable future is no easy task.

**Fraser  
McLachlan,**  
Chairman, Tokio  
Marine GX



The global clean tech sector faces enormous pressures – economic, political, and technical – that complicate progress and demand new kinds of underwriting support.

As Kermit the Frog once crooned, **“It’s not easy bein’ green.”** He may have been singing about his own identity, but his words echo the uncertainty and complexity facing those pushing the green transition forward today.

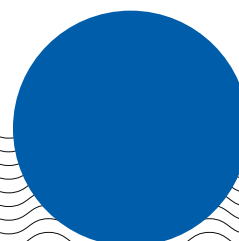
There has been great progress in the deployment of renewables, and the rate of fossil fuel displacement has increased. Meanwhile, the appetite for evolving green technologies such as green hydrogen and CCS continues to grow. However, at the same time, the green transition is not happening fast enough or at the required scale to keep the COP28 agreement to triple renewables by 2030. Annual CO<sub>2</sub> emissions are still on the rise<sup>1</sup>.

The global clean tech sector has been prone to volatility with moments of breakthrough often followed by moments of reassessment and correction – this is before taking into account exacerbating circumstances like geopolitical trade tensions, a global pandemic, and shifts in domestic government policies around the world. Volatility is now part of how the market builds resilience, but the pressure is intensifying.

Among the greatest pressures is the instability of the insurance market on which clean tech relies. Despite their best intentions, insurers are not currently doing enough to support the green transition.

Unlike Kermit the Frog, who lamented that “bein’ green” is unfashionable, green projects have proven to be very attractive to an influx of insurance capacity with little to no prior experience in the sector. This influx is necessary but lacks expertise and its support is insufficient.

1 [International Energy Agency, Global Energy Review 2025](#)



The insurance market is failing to keep pace with innovation in clean tech, leaving a critical gap in how risk is managed and transferred.

Moreover, as the green transition gathers momentum, innovation in insurance products available to key industry stakeholders is also failing to keep pace. It is the insurance market's role to transfer as much risk as it possibly can, at a fair price, within its financial means. Those at the vanguard of new clean tech development today need insurers to step up their offerings to better manage their exposures.

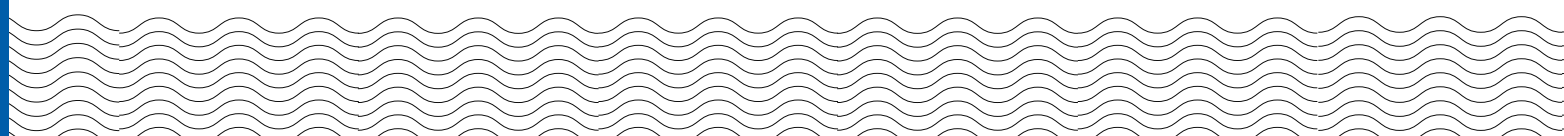
In this report – our first as TMGX – we cover:

- The 'perfect storm' of challenges that threaten to destabilise and undermine the global rollout of clean tech
- Lessons learned from GCube's 25+ years underwriting renewable energy and how they help us as TMGX to support wider decarbonisation efforts
- Areas of essential focus for the insurance market if it is to step up and fulfil its role in driving financial stability
- Our ongoing commitment as TMGX to deliver an insurance offering that enables our insureds to roll out their green plans with confidence

It's not easy writing green but, moving forward as TMGX, we are doubling down on our commitment to provide robust and stable insurance coverage across multiple green transition sectors.

All the best,

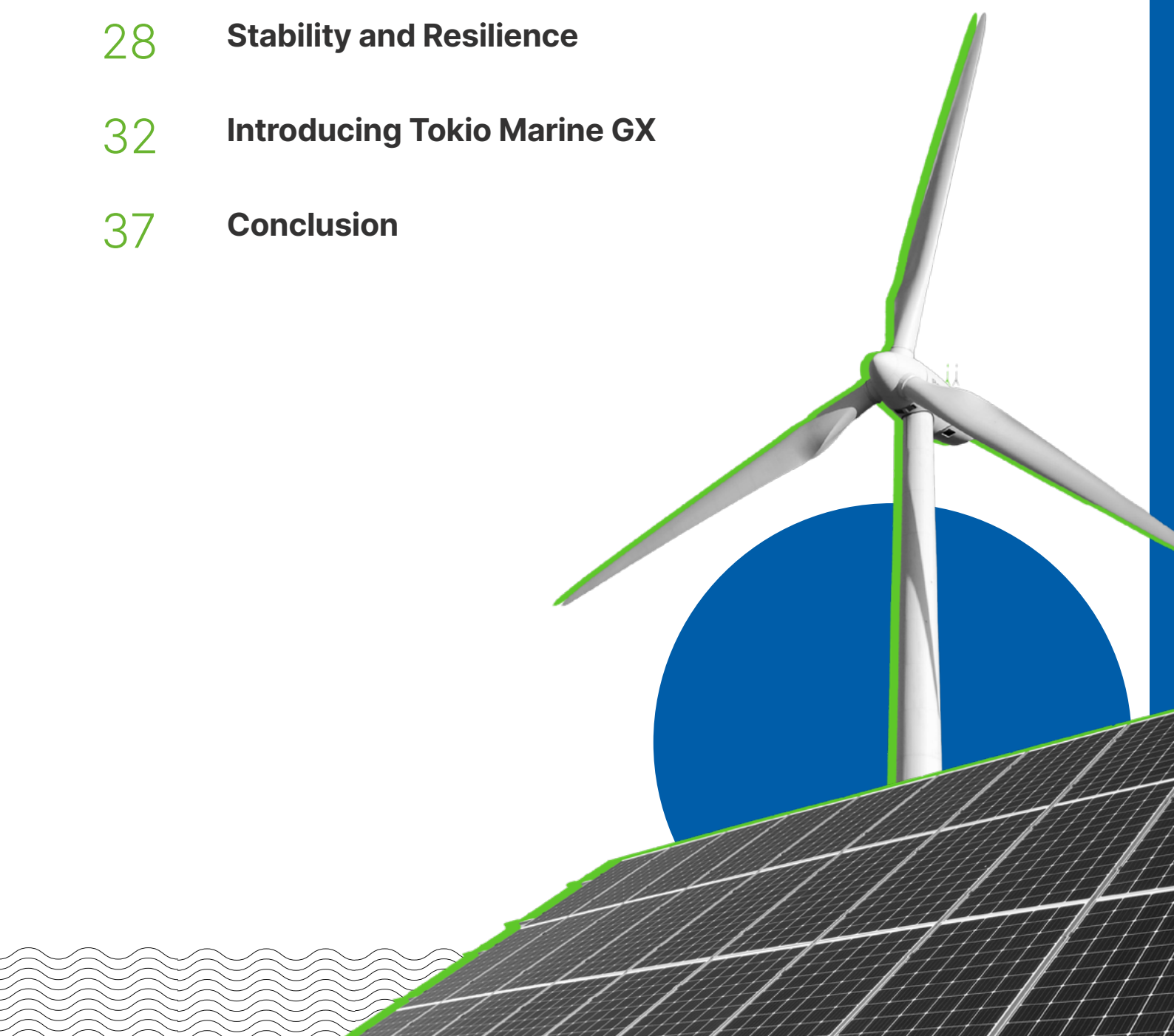
**Fraser**





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# The Perfect Storm

Oliver Litterick, Head of Renewables, TMGX

As the green transition progresses around the world with technological advances, support mechanisms, and ever greater investment, it is matched step for step by a combination of geopolitical, economic, and climatic challenges that threaten to undermine the global rollout of clean tech.

The signing of the 'One Big Beautiful Bill' into US law on 4 July highlights this precariousness. Key tax incentives for clean energy such as the 45Y Production Tax Credit and the 48E Investment Tax Credit will be phased out at the end of 2027, meanwhile stricter rules on Foreign Entities of Concern will add strain to the clean energy supply chain. Consequently, the US clean energy sector that has been a leader in the global transition is now scrambling to complete projects in time while pipelines shrink and investors reduce their exposure in line with their confidence.

But the higher the stakes are raised with publicly disclosed net zero targets and increased financial commitments, the more important it is that the insurance market is prepared to guide insureds through precarious moments of industry development. To be effective stewards for the sector, insurers must develop and maintain sustainable capacity management.

We have learned important lessons about what it takes to sustainably support industry growth in our extensive experience underwriting renewable energy projects as GCube, and we have often shared what we have learned to encourage collective collaboration on how to overcome these hurdles.

**Oliver Litterick,**  
Head of Renewables,  
TMGX



It is this that drives sustainable capacity management and protects our ability to pay future claims and continue to support emerging technologies.

In the process, we have enhanced our underwriting strategy and targeted the reduction of the industry's dominant risks to ensure the capacity we offer remains available and reliable for our clients over the long-term.

As we consider how insurers can step up to support a resilient green transition, we look at seven challenges forming a perfect storm within the renewables sector in 2025, and how they could translate to broader challenges in the wider green transition.





## Geopolitical risks are creating uncertainty

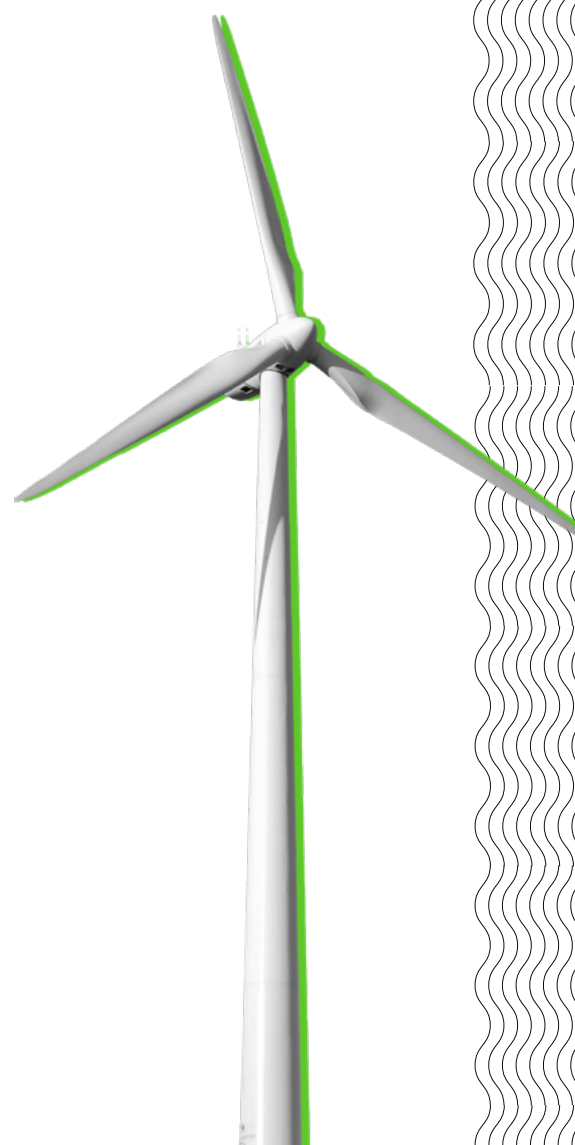
As the new US administration began preparing to take office, a sense of cautious confidence in the green industry's progress seemed to hold. Although a shift away from the previous clean energy focus was anticipated, it was also felt that this shift would not be immediate, nor would it significantly arrest the development of the green transition.

However, policy change has moved at a faster pace than expected. The recently announced import tariffs and reduction of tax credit support are having a significant impact on project viability. Projects are being shelved regularly as investors respond to the short- to mid-term uncertainty that the tariffs have introduced in the US market. The consequent slowdown in productivity and construction applies not only to offshore and onshore wind, but also to BESS – previously the fastest-growing energy asset class in the US.

From an insurance perspective, capacity is pivoting towards big operational projects that remain unaffected, and this is a key driver for market softening.

Outside of the US, energy security is a priority for several governments in the EU as well as for the UK – in response to war in Ukraine and to dependence on Russian fuel – and this has added urgency to accelerate energy transition plans. Although the tariffs will raise costs in the short-term, these markets – along with the Middle East – have an opportunity to attract international investment pulling out of the US market and further boost their uptick in construction and deployment.

Insurers will want to observe the extent to which the US withdrawal from green transition leadership allows China to ramp up its collaboration with developers.





We expect that the uptake of Chinese technology will gradually increase around the world as it follows the investment. This will require underwriters to educate themselves on the different risk profiles these technologies possess and manage new assets accordingly.

### Supply chain still yet to recover from the pandemic

In our 2022 **'Supply Another Day'** report, we found that sector-wide average downtime days between 2019 and 2020 rose by more than 10% before being exacerbated by the COVID-19 pandemic and war in Ukraine (see Figure 1). At the time we said that investment in diversification of supply, particularly for solar, would be crucial to service the unprecedented demand for key parts and components for renewables projects.

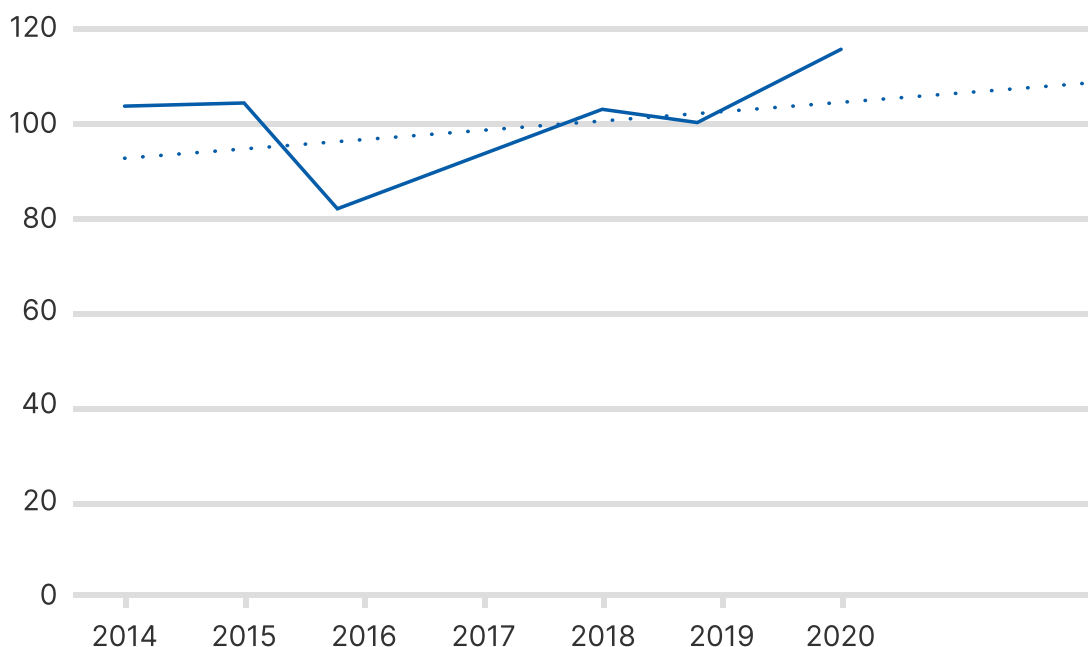


Figure 1:  
Sector-wide  
Average  
Downtime  
(Days) by year  
(2014-2020)

### Sector wide average downtime (Days) TMGX Data, 2022

The dotted trendline featured in this graph indicates the forecasted trajectory of data beyond 2020.

Three years on, our conversations with renewables market participants indicate that the supply chain has not made a full recovery from global disruption and has suffered further setbacks, most recently driven by the uncertainty caused by new trade tariffs.

Furthermore, progress in US domestic solar manufacturing is expected to be impacted significantly by legislation such as One Big Beautiful Bill, which will lead to an early phase out of IRA's 45X tax credit that incentivises the production of key components and materials. Many of the parts for wind turbines, solar panels, and BESS are sourced from China and, as we have stated before, overreliance on one supply line makes contingency planning difficult and costly.

Having highlighted this issue, we acted decisively with insureds to tackle supply risk. This focus has ensured that our insureds' average downtime days have more than halved since 2020 in a time where the wider industry continues to be hampered by long supply queues (see Figure 2).

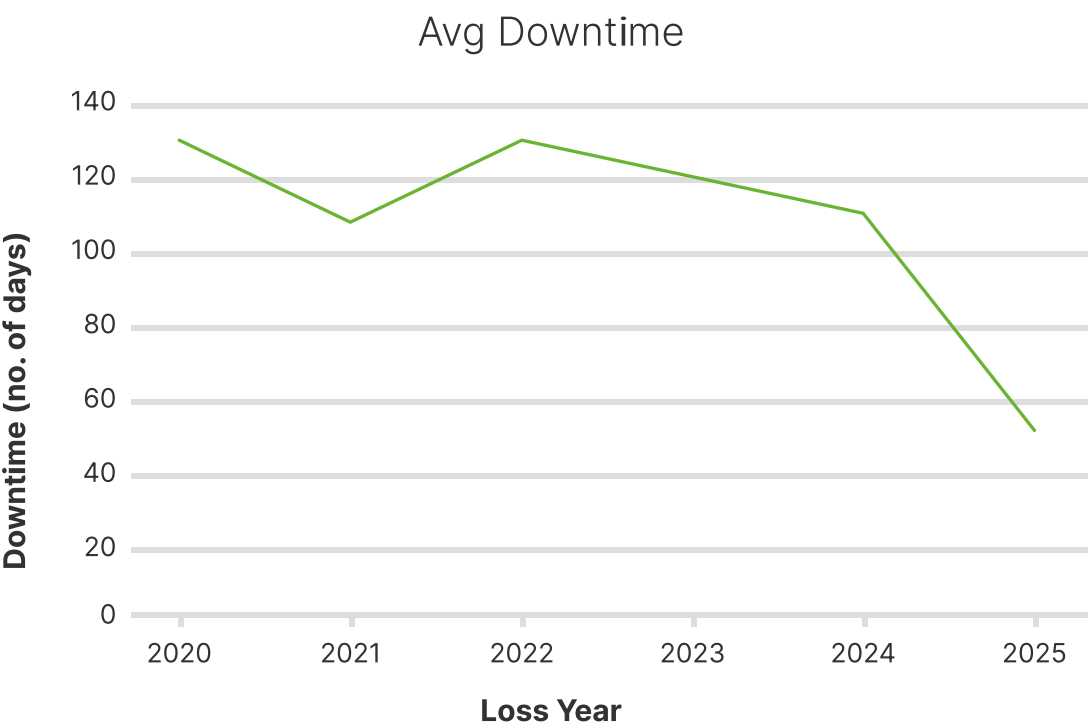


Figure 2:  
Sector-wide  
Average  
Downtime  
(Days) by year  
(2020-2025)

Demand has only increased as the aim to meet 2030 decarbonisation targets sparks a construction boom in renewables. For instance, demand for transformers – many of which are domestically manufactured – is now so high that transformer lead times and replacement times have become a decisive factor in an insurer's appetite to support projects.

In line with our broader reduction in supply risk for our insureds, transformer lead times have also more than halved across the portfolio (see Figure 3). These downward trends, which run counter to the typical pattern in the industry, are a result of doubling down on closer industry collaboration with insureds and suppliers.

### Transformer lead times

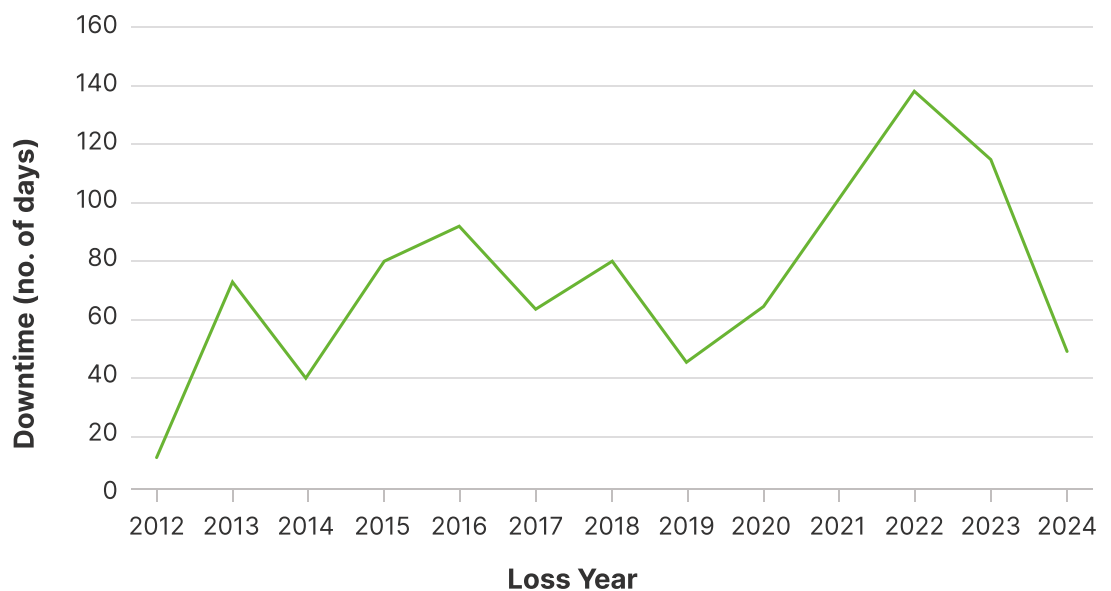


Figure 3:  
Downtime  
caused by  
transformer  
lead times  
(days) by year  
(2012-2024)



As well as impacting upfront project economics through cost inflation and delayed lead times, the underdeveloped supply chain leaves projects further exposed in the event of equipment damage or failure.

As projects grow in scale, this is a risk that the industry must manage collectively through strong working relationships to improve accessibility to spare parts and repairs.

### Climate risks are escalating in previously benign markets

What highlights the frailty of the supply chain most is the exposure of assets to extreme weather events, such as hailstorms, flooding, and fires – phenomena that are intensifying with global warming.

Historically, extreme weather was regarded as a US-exclusive challenge. Now though, as our **'Known Unknowns'** report this year underlined, this is very much a global challenge with projects in relatively climate-benign markets in Europe and the Middle East sustaining significant losses in 2024. Our historic claims data shows that while extreme storms are less frequent in these regions, the losses they incur represent a significant portion of total climate-related losses (see Figure 5 and Figure 6). These markets need only look at the difficulty of insuring projects in the parts of the US most susceptible to hurricanes to understand the value of proactively managing these risks (see Figure 4).



North America (loss incurred 100% vs. loss type)

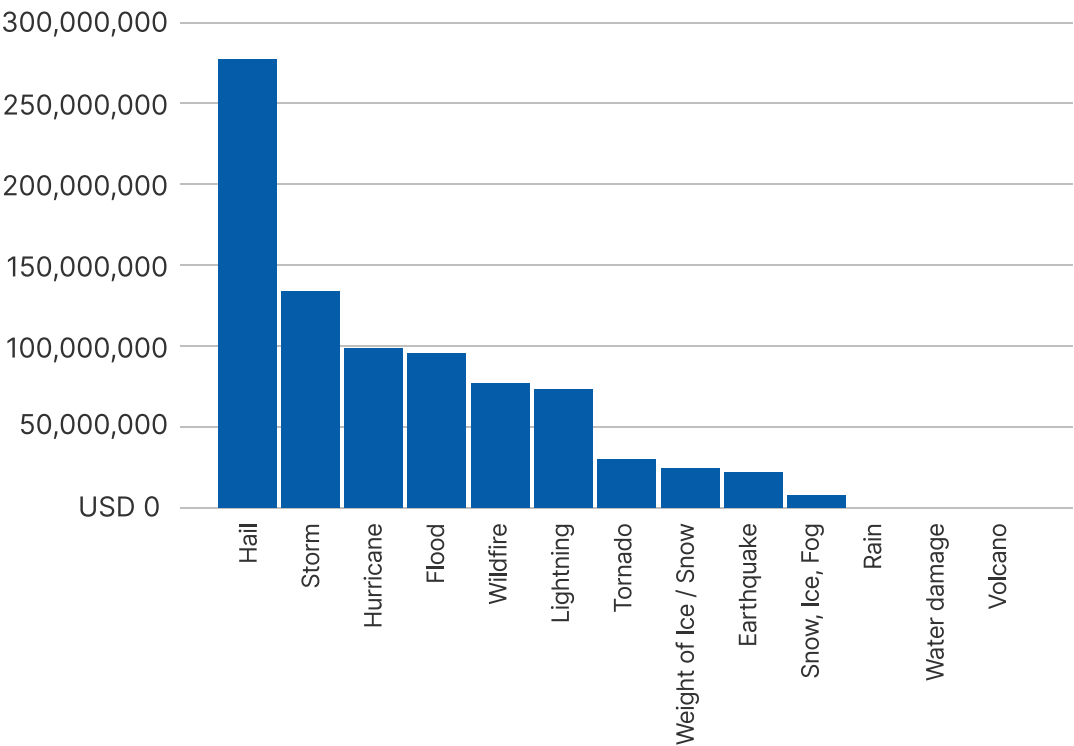


Figure 4: North American losses by loss type (TMGX data: 2008-2025)

Europe (loss incurred 100% vs. loss type)

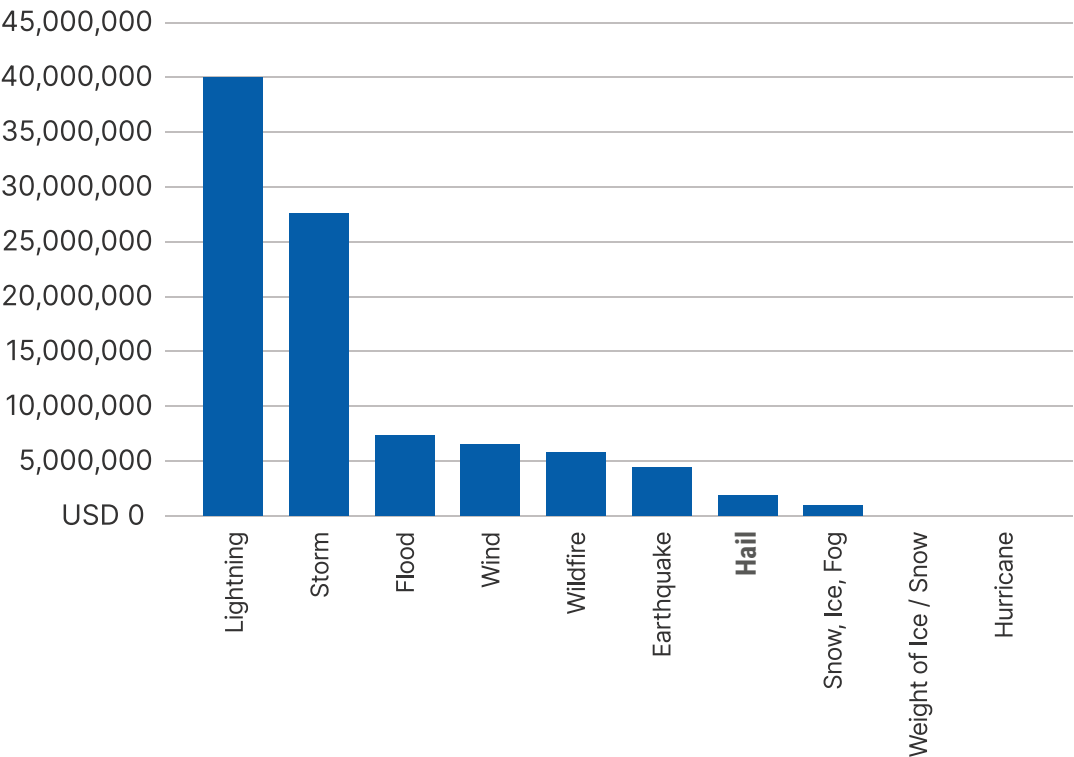


Figure 5: European losses by loss type (TMGX data: 2008-2025)

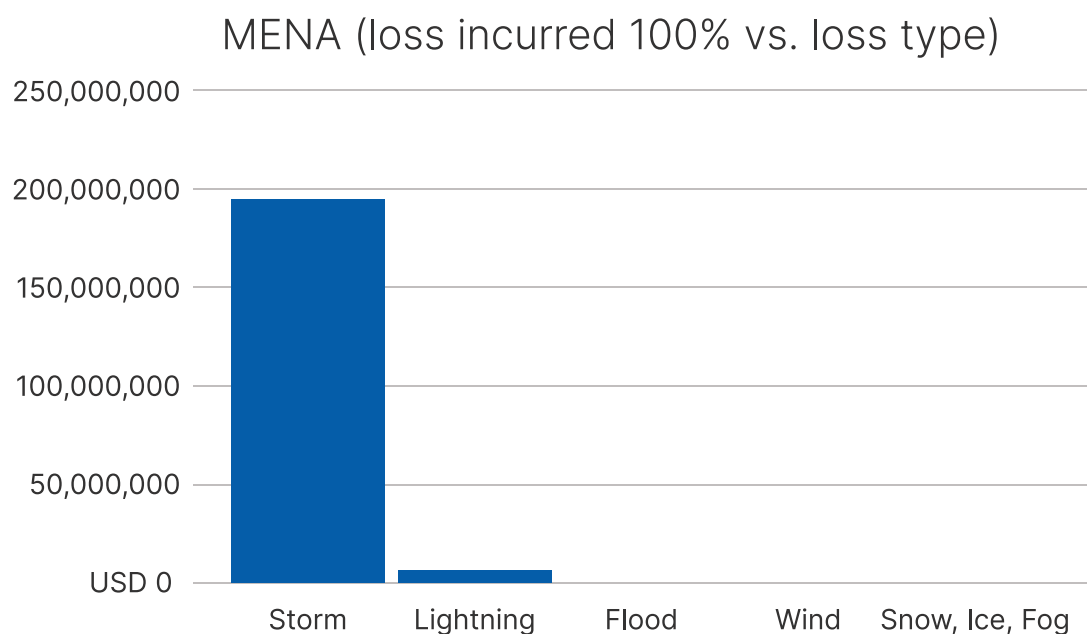


Figure 6: MENA losses by loss type (TMGX data: 2008-2025)

One of the main concerns of the 'Known Unknowns' report is the lack of weather data and modelling in both established and emerging markets. Without this information, underwriting decisions are not as informed as they might be. Since clean tech is expanding into new locations, stakeholders are often managing sites with little to no historic data which makes identifying potential hazards extremely challenging.

Our claims data indicates that extreme weather, or Natural Catastrophe (Nat Cat), accounts for 90% of insured solar losses (see Figure 7). This is despite the fact that, together, the number of mechanical and electrical breakdown claims almost doubles the number of Nat Cat claims. This emphasises how costly Nat Cat losses are to developers and insurers and why the prevalence of these events requires the industry to alter its approach to extreme weather.

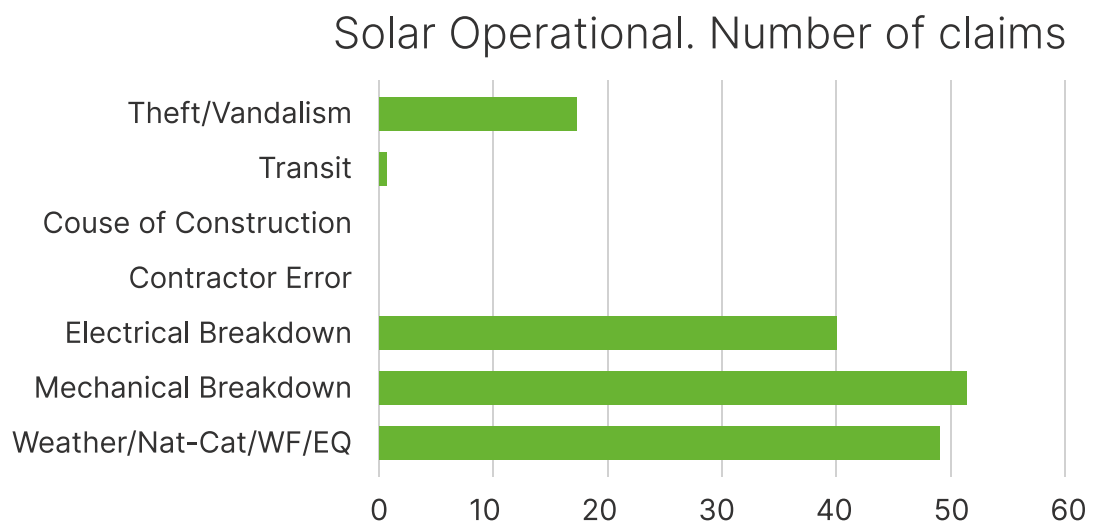
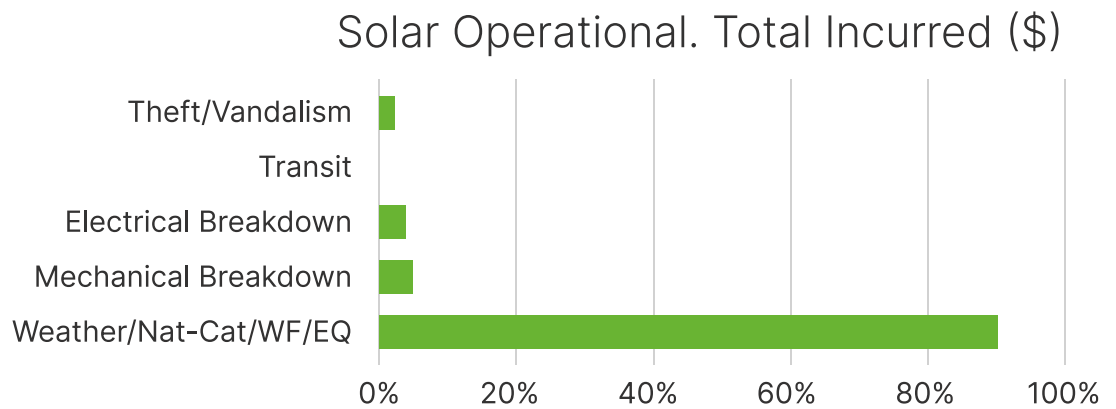


Figure 7:  
TMGX claims  
data from  
January 2022  
- December  
2024

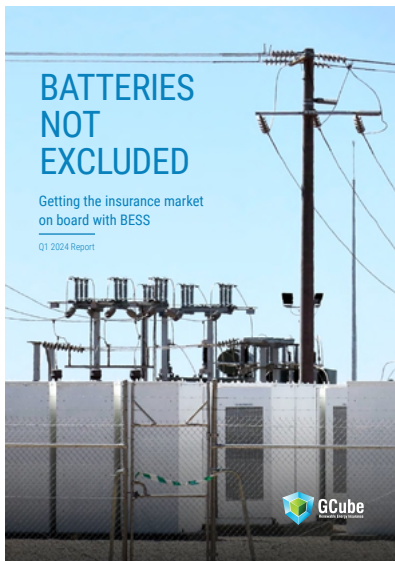
In recent years we have seen the renewables sector try to address its exposure to Nat Cat but we also believe that innovative insurance products that go beyond traditional lender requirements must be explored to support project owners and better protect their assets.





### Aging infrastructure not green transition-ready

High-profile energy infrastructure failures in 2025 – such as the blackout across the Iberian Peninsula or the Heathrow power outage – have illustrated the limitations and frailty of current grid infrastructure and its ability to support new technology. These moments have been a wakeup call regarding the issues that can occur if renewables are integrated with infrastructure that is not fit for purpose.



These failures demonstrate the value of managing the peaks and troughs of renewable energy, emphasising the significant role BESS will play in the transition. The rise of BESS introduces a unique set of risks that we explored in our 2024 report **'Batteries Not Excluded'** – and we have provided much-needed insurance capacity for this asset class through our \$125m BESS consortium. Our analysis of the BESS Failure Event Database showed that 58% of system failures occur in the first two years of operation (see Figure 8) and the concern for insurers is that if this failure trend persists as the sector scales up it will not be financially sustainable.

Events vs. System Age

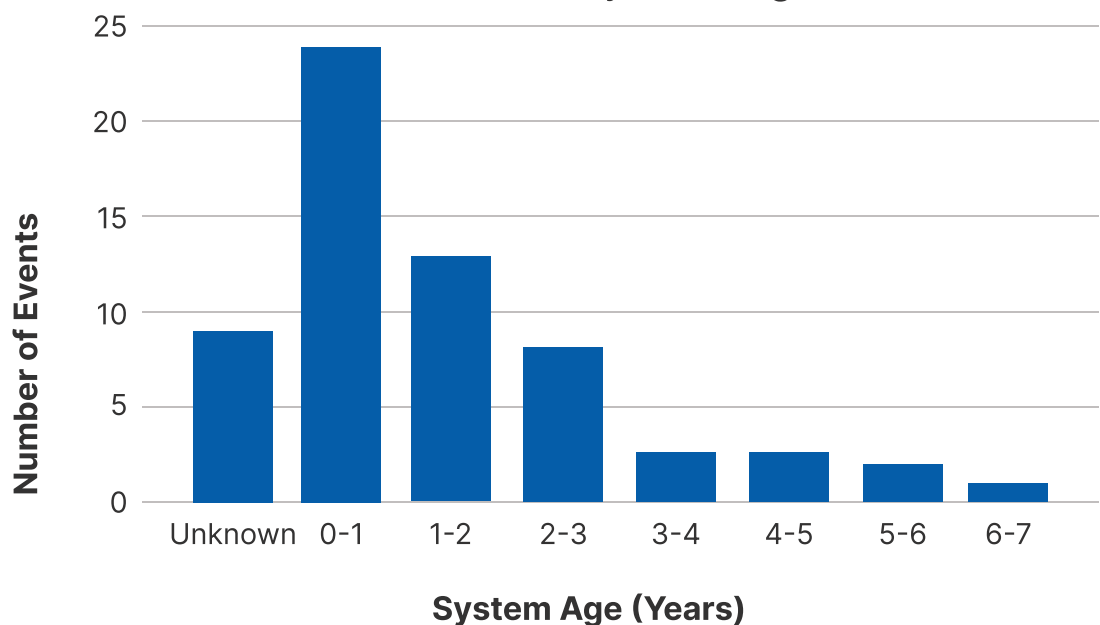


Figure 8:  
Events per year  
by system age  
(BESS)

These energy infrastructure failures highlight the need for diverse energy types to establish contingency. This is where we see the green transition expanding beyond the widespread deployment of wind and solar.

For insurers, success here lies in the industry educating itself so that it is prepared for emerging risks from new assets and in knowledge-sharing to eliminate avoidable risks learned from integrating new assets.







## Race to scale brings complexity and outsized risks

To deliver clean tech at the volumes and pace necessary for net zero objectives, new projects are being developed at a greater scale and speed than before. In today's market this means more megaprojects, more hybrid asset projects, increased appetite for 24/7 power projects and industrial clusters, and more complex financial instruments and agreements underpinning it all.

Pursuing these new avenues is a crucial step for the green transition. However, with scale comes outsized risk, with speed comes construction errors, and with diversification of power assets and financial instruments comes complexity.

For insurers, one of the key areas to address is the jump in exposed values in accordance with the higher revenue opportunities of bigger projects. For example, in the US over 20 solar projects with a capacity of 500MW or more are either online or due to come online in the next few years – if a loss event should happen at one of these sites, the cost of auditing and correcting is magnified along with the volume of lost revenue covered by insurance<sup>2</sup>.

Although the frequency of attritional losses has been driven down by technology standardisation in the market over the last decade, the numbers attached to each claim are becoming much greater.

In terms of speed, we noted in last year's '**Arrested Development**' report that, after Nat Cat, contractor error was the biggest source of onshore construction claims by severity with 16% of the share (see Figure 9). This phenomenon is even more pronounced in the offshore sector where contractor error accounts for over a third of the cost of claims at 36% (see Figure 10).



### Onshore Construction Claims by Claim Type

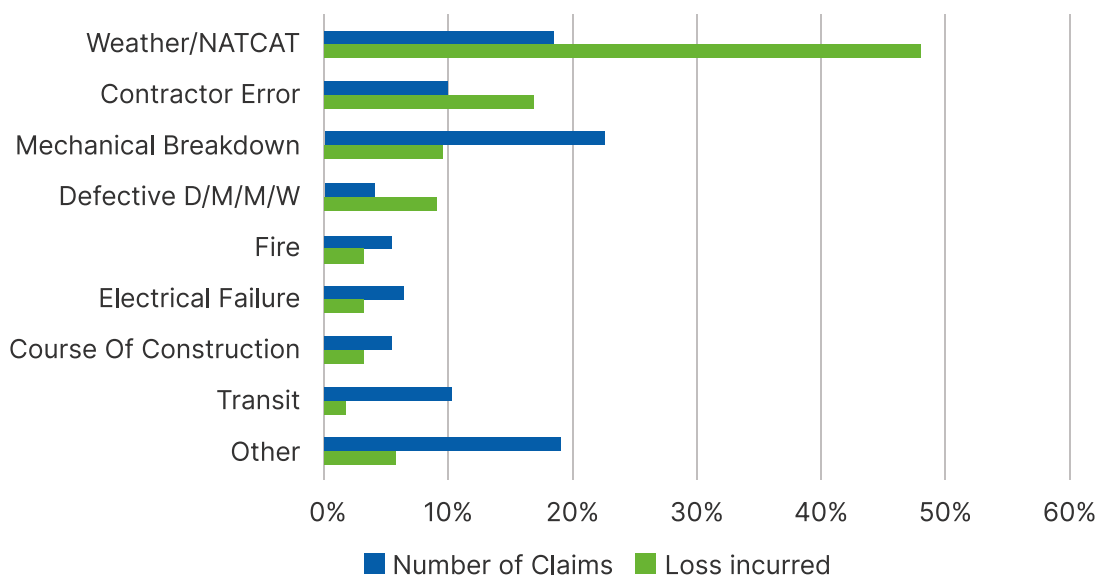


Figure 9:  
Onshore  
construction  
claims by claim  
type (2013-  
2022)

### Offshore Construction Claims by Claim Type

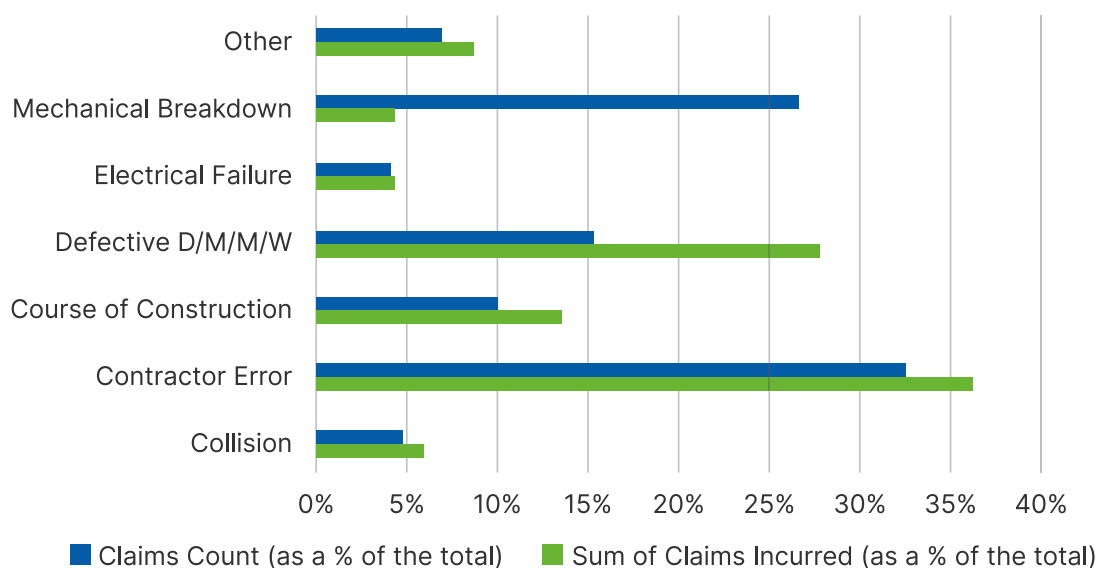


Figure 10:  
Offshore  
construction  
claims by claim  
type (2013-  
2022)

The need to reach construction milestones by certain dates in order to be eligible for policy incentives, combined with a shortage of skilled workers and specialist installation equipment, raises the likelihood of rushed project construction. This, in turn, raises the risk of contractor error. These losses are avoidable and, as the 'Delay in Start Up' claims process grows in complexity, this is an area the industry must not dismiss if the green construction boom is to be sustainable.

Meanwhile, the mix of technologies and intricate financial structures used for hybrid projects introduces additional complexity as it pools together different specialist fields requiring different contractors and more varied risk management protocols. The key to success here is to develop a synergy between the different specialist areas and to share expertise for a more holistic understanding of a project's risk profile so that developers can more confidently capitalise on the efficiency that mixed technologies can bring.



## Emerging technologies come with unfamiliar risk profiles

In tandem with the scaling of projects, a common feature of the green transition is the adoption of relatively untested technologies that have a limited operational track record for underwriters to use to inform their assessments.

The uptake of emerging technologies – whether that's scaled up models, new innovations, or equipment from new manufacturers in the global supply chain – brings novelty to the industry that the insurance market must become familiar with to support developers. Much of this revolves around incrementally building experience with untested technology, but it is equally important that the industry works towards standardisation and does not rely on insurance to fund R&D.

In our 2023 '**Vertical Limit**' report we outlined a correlation between the uptick in mechanical breakdown, component failures, and serial defects and the implementation of scaled up 8MW+ wind turbines in the offshore sector. Our key findings were that component failures during construction accounted for 55% of claims by frequency for 8MW+ turbines, and that this equipment is commonly experiencing failures within two years of operation (see Figure 11 and Figure 12 on next page).

The rapid deployment of larger, unproven technologies has driven unsustainable financial risk in the offshore wind sector, and it is reassuring to see that major manufacturers have observed this and shifted to prioritise product quality over product size.

Innovations such as floating offshore wind, along with new clean technologies like CCS and low-carbon hydrogen, are all exposed to risks that the market has yet to experience, which raises the possibility of an insurance protection gap in these sectors while more data is collected to encourage wide insurance penetration.



Figure 11:  
Turbine  
claims (2009-  
2021) during  
construction  
by turbine size  
(MW output)

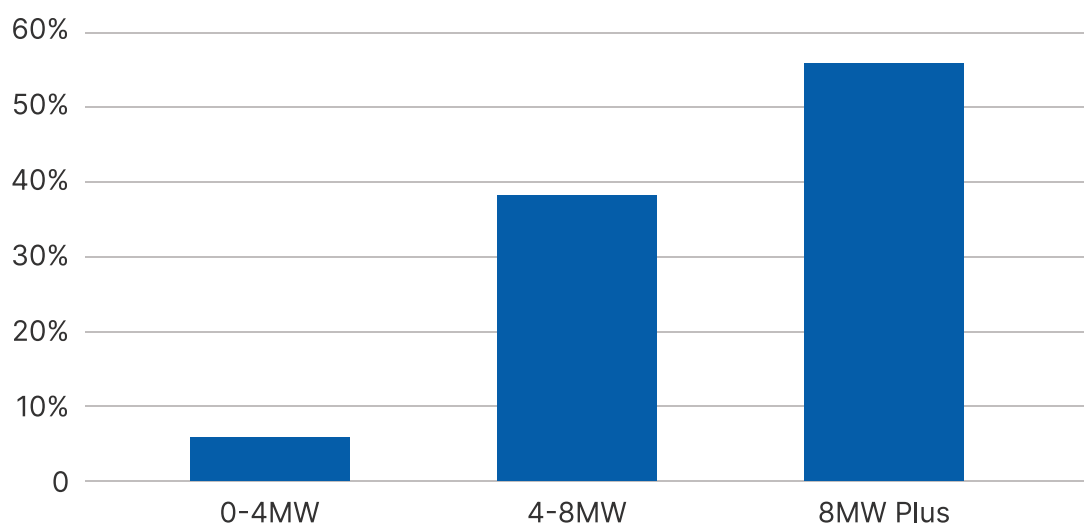
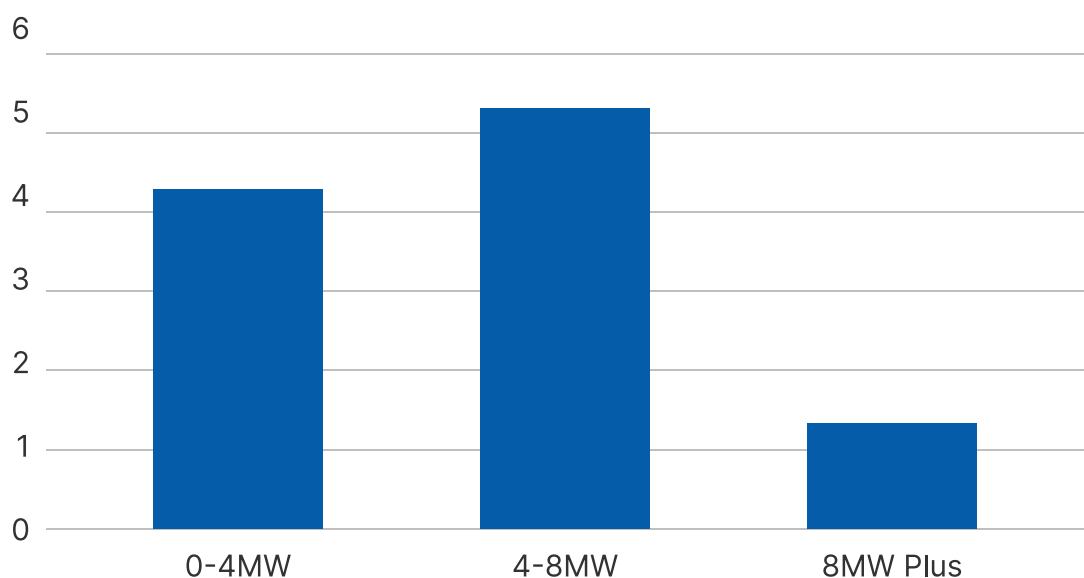


Figure 12:  
Average  
timeframe  
(year) of  
component  
failure during  
operation by  
turbine size  
(MW output)



Moreover, the global supply chain is evolving, and new manufacturers are coming to the fore with attractive products for developers. Over recent years we have seen, for instance, Chinese wind turbine manufacturers expand their market share in Europe. Because these products have not been in mainstream use before, they too carry unfamiliar risk profiles that owners must carefully monitor.



Effective risk management depends on building experience and the deployment of specialist insurance capacity – the process that we have followed for over two decades in pioneering offshore wind insurance coverage and, later on, in solar and BESS insurance coverage.





## Inexperienced insurance capacity is leaving a knowledge gap

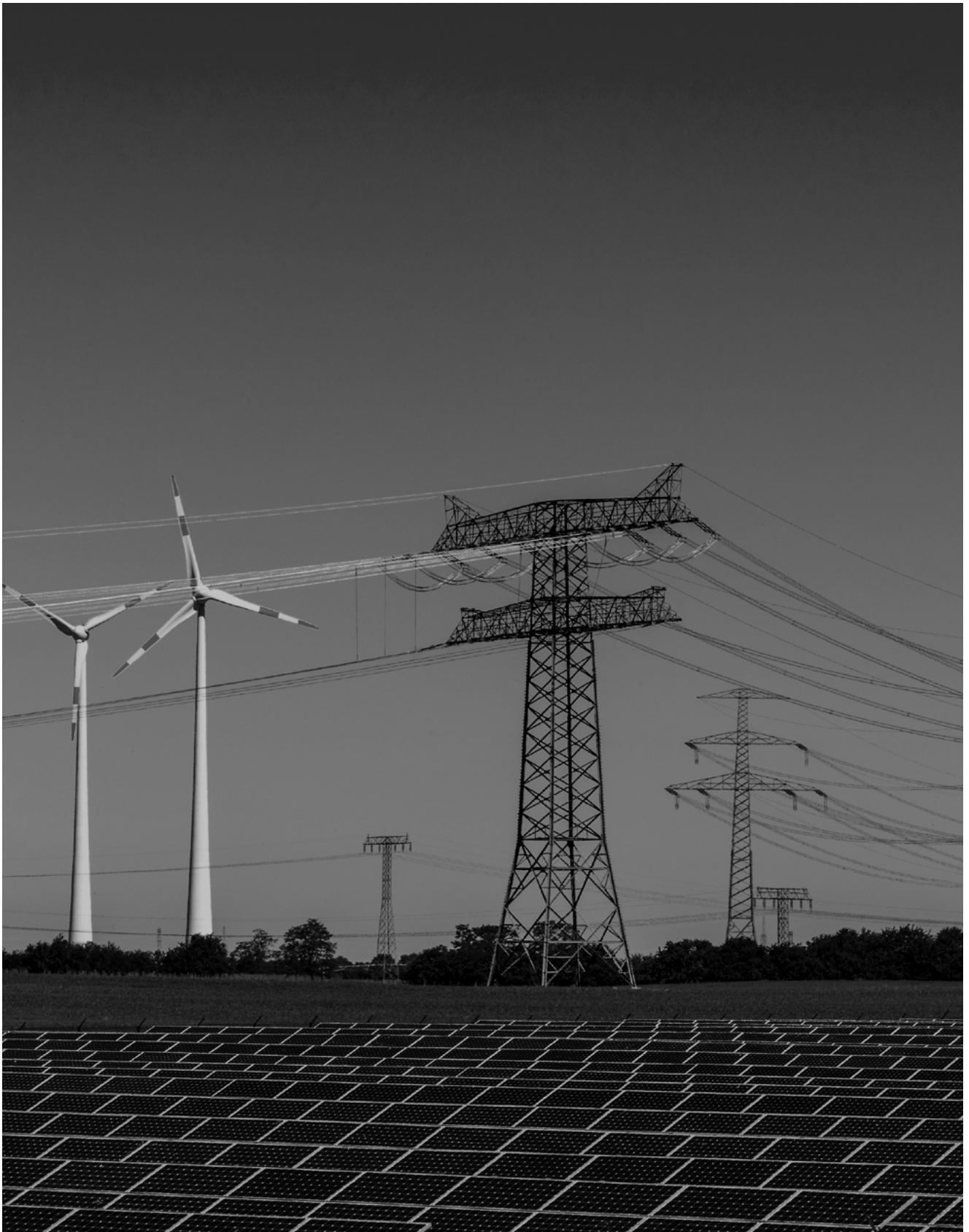
This takes us to the final element of the perfect storm threatening the progress of the green transition: the knowledge gap in the insurance market. The insurance market's job is to ensure the sector grows sustainably, allocating risk in a way that protects all stakeholders should the worst happen.

However, in the renewables insurance market we have seen capacity come and go opportunistically, variously driving hard and soft market cycles, with mixed results for risk mitigation and the long-term insurability of the industry.

Because the green transition is full of opportunities, it is important that there is plenty of capacity available to developers. Nonetheless, short-term approaches and a lack of capacity with knowledge of energy transition technologies have the effect of driving rates down and creating instability. This ultimately threatens the viability of projects and the long-term sustainability of the market.

The purpose of rolling out TMGX is to strengthen our commitment to provide insureds with specialist capacity in the green transition, supported by long-term experience and extensive analysis of market data. We believe that, underpinning the perfect storm of challenges, is insufficient expert insurance capacity and products that meet the changing needs of insureds in the green transformation.

This is why we launched TMGX: we are expanding our offering substantially in recognition of the fact that the nascent clean tech sector requires more from insurers to navigate challenges with resilience and confidence.



# Stability and Resilience

Global investment in the low-carbon energy transition exceeded \$2 trillion for the first time in 2024<sup>3</sup>. To transition to net zero, \$9.2 trillion in annual spending on physical assets is needed<sup>4</sup>.

With the level of investment at stake, the volume of clean tech projects planned, and the perfect storm of challenges that threaten growth, the insurance market must reassess its role in the green transition and step up its support for the industry. When functioning at its best, the insurance market can strike a balance between allocating risk exposure equitably across stakeholders and providing capacity to support new technologies.

However, current insurance overcapacity has made the task of sharing risk exposures more difficult as new players compete for a share of the market with undervalued estimates of emerging risks. In this environment, the insurance sector's culture is more weighted towards selling products to customers than working with customers to help their businesses.

**TMGX has identified the three pillars** of a stable, well-informed and knowledgeable green transition insurance market. We believe that if the market consolidates these pillars, then it will play a much more effective role in ensuring the resilience of the green transition:

<sup>3</sup> [Bloomberg New Energy Finance, Energy Transition Investment Trends 2025](#)

<sup>4</sup> [McKinsey, The net-zero transition: What it would cost, what it could bring](#)

## 1. Coordinated investment in data & analytics

For all participants in the green transition there will come a point where we have to step outside our comfort zone and face the unknown. However, the best underwriting decisions are made when we have a reliable base of knowledge to guide us.

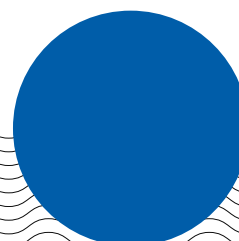
The green transition will expand and deploy projects in previously uncharted territories equipped with new types of clean technology. Given this, we think coordinated investment in data and analytics should be a top priority for insurers. Having a data-driven process - supported by analytical services and underwriting experience - is the only way to get an accurate risk model in place for new projects and understand how clean technologies are performing and why.

This level of detail will be a key differentiator between insurers and between insured projects as the industry evolves with increased nuance and complexity.

## 2. Productive collaboration

In general, the insurance market operates with a siloed mentality. While this approach may help perfect certain insurance products for insureds, it also contributes to a disparate risk management environment which is inflexible to the changing needs of insureds. On top of that, this prevailing mentality means that individual stakeholders are less likely to have a holistic awareness of a project's risk exposure.

Compared to other sectors, the clean energy sector has tended to be cautious about discussing the risks it faces. Although it has become more forthcoming over time, there is still more to do to improve the transparency of risk in the sector and break down the barriers to shared problem-solving.



We think initiating productive collaboration amongst key stakeholders is an important task for insurers in the green transition, working across different clean technology areas. Closer working relationships between insurers, developers, brokers, and lenders removes the inaccuracy of guesswork and helps the sector overcome inevitable challenges more cohesively.

### 3. Product innovation

The first two pillars show that there is plenty of financial risk in the industry that could be usefully transferred onto insurers' balance sheets, but this is not fully understood by the insurance market. If insurers understand what these financial risks are, it is likely that we would accept more risk than we currently do.

With improved data and analytics and more extensive industry collaboration, we expect insurers to arrive at a position where we can offer new products that better address the needs of insureds in the green transition.

One area of the renewables market in the US, for example, that is particularly in need of insurance product innovation is tax credits. Recent legislative changes raise uncertainty for projects counting on policy support mechanisms like tax credits. We see this as a critical part of the US market for insurers to engage with and support the industry by redistributing the growing risk associated with tax credits.

It is this kind of innovation that **TMGX** regards as a crucial next step for the insurance market as it supports the roll out of clean technologies.







# Introducing Tokio Marine GX

When GCube entered the renewable energy market over 25 years ago, the industry was niche. Today, it is more mainstream and, in many markets, leads the way for new energy capacity additions to the grid.

Indeed, we estimate that roughly \$10bn of insurance premium will follow the projected investment in the green transition by 2030 - this emphasises the scale of the market's potential now. The green transition represents a once-in-a-generation opportunity for the insurance industry to support accelerated decarbonisation around the world.

Reflecting on both the perfect storm of challenges threatening the progress of the global green transition and the insurance market's role in improving the industry's resilience, Tokio Marine identified that it could provide enhanced support to insureds across multiple green transformation sectors.

**TMGX** is offering up to \$500 million on any single risk and is committed to becoming a prominent lead underwriter, applying decades of knowledge and global expertise to offer profitable and sustainable capacity through the green transition. As our history shows, responsible stewardship in the green transition does not simply mean saturating the market with capacity, it means consistently reducing risks across the balance sheet so that capacity can go further to support new opportunities in the sector.

This platform is Tokio Marine's commitment to sustainable green insurance, and this is the roadmap to deliver it:



## Data & Analytics

GCube always stood out in the market for its comprehensive understanding of the tech it insures. This was crucial in honing its position as renewable energy specialists and is the foundation from which TMGX grows.

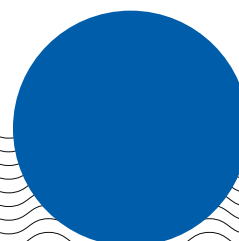
This understanding does not come from experience alone but also through the strategic use of, and investment in, data collection and analysis tools to monitor how technologies work and how to maintain optimal performance.

TMGX is reaffirming this with increased investment in data and analytics resources across a wider base of clean technologies to support underwriting decisions and improve familiarity with the performance of these assets. Access to these resources will not only improve our pricing models according to nuances that are commonly overlooked, but it will also better enable us to provide insureds with services tailored to their individual needs.

## Collaboration

We have long been at the forefront of cultivating a collaborative approach in the renewables space. GCube hosted over twenty advisory council events in North America – and numerous risk seminars in Europe too – with the express purpose of bringing together leaders throughout the renewables industry to share ideas, ask questions of one another, and collectively problem-solve.

Halving the number of business downtime days at our insureds' projects by reducing supply risk since 2020 stands as a clear example of the immense value of closer working relationships (see Figure 2 and Figure 3 in Section 1). This way of working has helped us to create stable conditions for the projects we underwrite to operate as needed with less susceptibility to the market's prevailing risk trends.



TMGX continues to drive this purposeful collaboration as we operate more broadly across the green transition. Alongside hosting events for candid discussions amongst key stakeholders in different parts of the industry, TMGX brings together the specialist class distinctions that are often siloed and works with a holistic understanding of the blending of risks across different strands of the insurance market.

To TMGX, productive collaboration looks like balancing risk so that it is aligned with all the parties involved in a project – rather than falling unsustainably on one party.

## New Products

GCube had long-standing pedigree in pioneering green insurance products in the early formation of new renewable energy markets. Making capacity available for relatively untested emerging technologies paved the way for innovative product offerings after learning lessons in challenging circumstances.

TMGX builds on this legacy with targeted product innovation across a wider scope of clean technologies. Insureds' needs have multiplied since the early days of renewable energy and are now more varied than before.

TMGX recognises that there are opportunities for the insurance market to deliver greater coverage for new exposures in the industry and will be focused on identifying protection gaps where fresh capacity can have a decisive impact.



TMGX's insurance products and risk solution services equip businesses, innovators, entrepreneurs and investors - private and public - with the support they need to secure funding and build and operate their sustainable initiatives. The business will offer a range of products and services to address risks linked to green initiatives from financial products, such as credit and surety, to bespoke policies for renewables, nuclear and hydrogen risks.

In consolidating around these three pillars, TMGX aims to mark out the role insurers should be playing in the green transition and lead the way in securing its resilience.







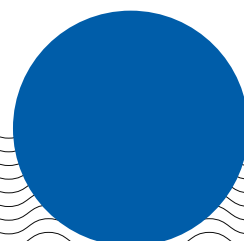
# Conclusion

The insurance market has suffered enough setbacks and heavy losses in the global clean tech sector during its development to perhaps warrant a self-protective approach to the coverage it offers. We witnessed this reaction from insurers in the early growth phases of wind and solar where the insurance market hardened after hefty claims caused capacity to drop. We also experienced this first-hand a decade ago in the BESS sector where a significant early loss forced us to revise and refine our approach.

However, it is the endurance through these challenges – like the perfect storm we face today – that drives the green transition closer towards its goal of sustainability, correcting past mistakes and establishing best practice. The remarkable expansion of the clean tech sector, in which the opportunities for insurers are now abundant, is due in large part to long-term strategies in the insurance market to guide it through volatility.

As the sector continues to grow, developing fresh complexity as it does so, it is clear to us that insurers will play a decisive role again in determining the sector's resilience and viability. There is more that insurers can do to fulfil this role. It is not enough to notice the green opportunity and offer capacity – the insurance market must learn with, and adapt to, the emerging technologies we support with the aim of allocating risk more equitably across stakeholders.

Why TMGX and why now? We have looked at the sector and identified both the challenges it faces and the needs that are being overlooked and this is our proactive response to step up and lead as we have done before.





We're very excited about the opportunities that lie ahead in the green transition and are proud of the new, refined offerings we can bring to the table to better support our customers.

After reflecting on what it means to be green, Kermit the Frog takes pride in his outsider status and calls it 'beautiful'. Now is the time for the insurance market to likewise double down on being green. The green transition is happening at pace and at scale and is fast moving out of its outsider status – this is what insurers must keep up with to commit to sustainable growth.



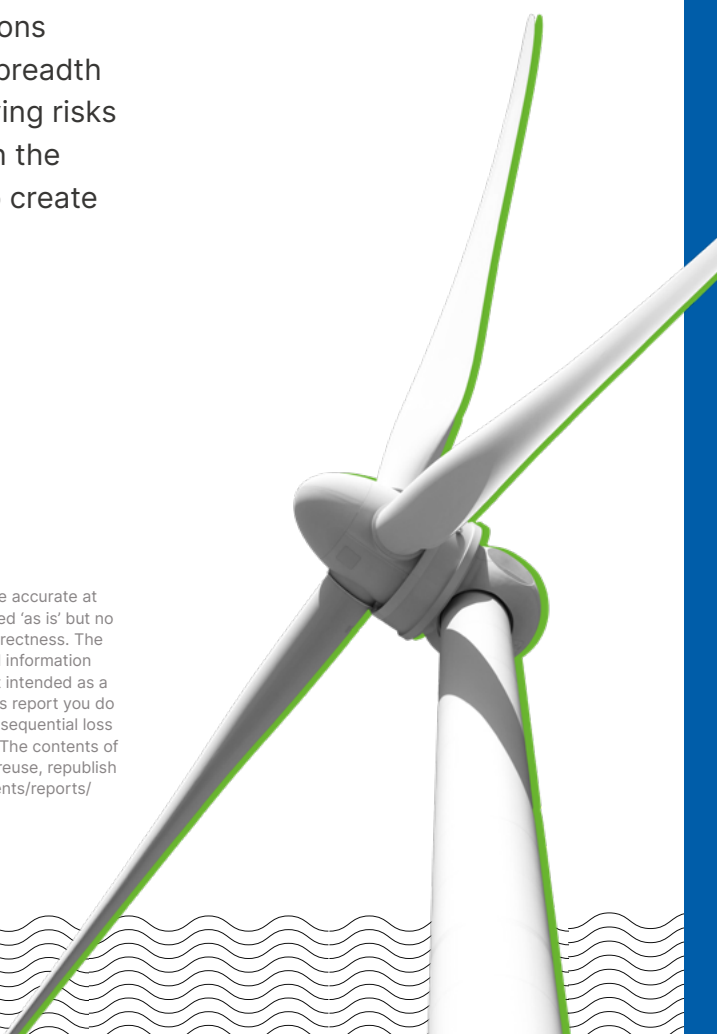
# About Tokio Marine GX

Founded upon GCube's decades of experience in renewable energy underwriting and claims, and with expertise drawn from across Tokio Marine's global operations, Tokio Marine GX provides a single point of access to a suite of products and services, for partners and clients committed to more sustainable practices. Tokio Marine GX is part of Tokio Marine Group. Tokio Marine Group is one of the world's largest global insurance and risk players with a market capitalization of approx. \$81 billion as of June 30, 2025, a network encompassing Japan and 46 countries and regions worldwide, and over 43,000 employees. Tokio Marine Group has the capabilities to drive genuine positive change through a business model grounded in a sense of purpose and social responsibility, built on 145 years of history and an enduring culture that fosters innovation and expertise.

Composed of a diverse range of insurance and solutions businesses across the world, that bring a depth and breadth of capabilities to address and mitigate the ever-evolving risks we face, we provide our clients and communities with the security they need to move forward, while working to create more resilient societies and a better tomorrow.

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## Tokio Marine GX's Offices

### AMSTERDAM OFFICE

Kraanspoor 50  
1033 se Amsterdam  
The Netherlands  
+31 (0) 610 217 494

### MADRID OFFICE

Paseo de la Castellana 55  
1st Floor, 28046 Madrid  
Spain  
+34 671 789 979

### ORANGE COUNTY OFFICE

1 MacArthur Place  
5th Floor  
Santa Ana, CA 92707  
+1 949 515 9981

### HOUSTON OFFICE

13403 Northwest Fwy  
Houston, TX 77040  
United States  
+1 713-690-7300

### NEW YORK OFFICE

1133 Avenue of the Americas  
Suite 640  
New York,  
NY 10036  
+1 212 863 2211

### SYDNEY OFFICE

60 Margaret Street  
Level 17, Sydney NSW 2000  
Australia  
+ 61 2 9225 7500

### LONDON OFFICE

20 Fenchurch St  
London  
EC3M 3BY  
+44 (0) 20 7977 0200



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**GX**

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