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The big power shift:

Insurance, innovation and investment opportunities in a soft market

Let's go

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Power Market Review 2025

Table of contents

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Introducing the Power Market Review 2025

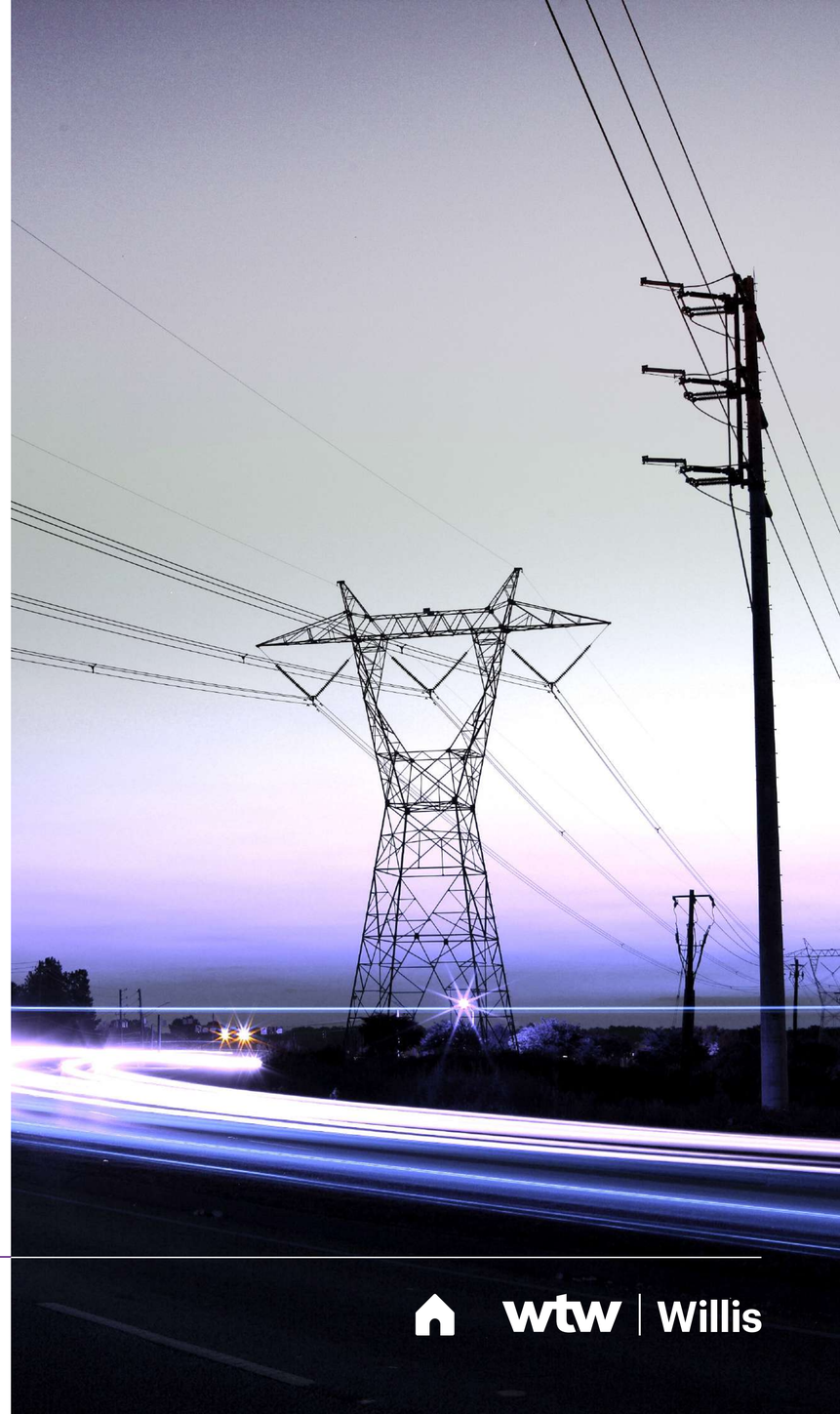
The power surge is now. The headline from the Power Market Review in 2024 rings true in 2025. Power companies are the gateway to an electrified future, but volatility from geopolitical headwinds, weather-related damage from climate change, limited investment from regulatory bodies and failures of aging infrastructure are major barriers to growth.

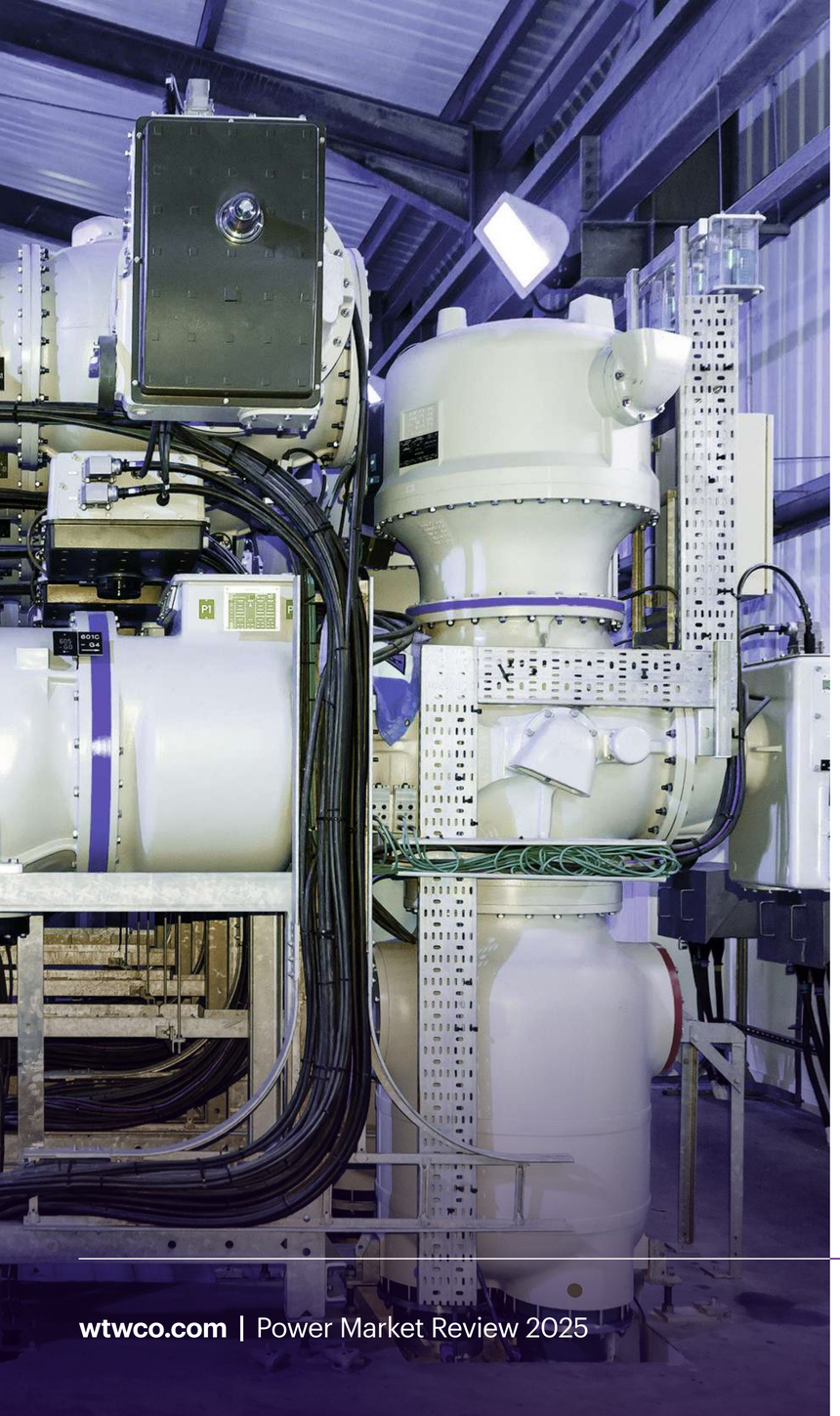
The demand curve is increasing exponentially. And future-ready power companies are using insurance strategically in a soft market.

Key themes this year

- **Nuclear energy: A strategic power play**
  The reliability, scalability, and low-carbon profile of nuclear energy make it an attractive proposition to technology giants, who are big consumers of energy and are looking for ways to generate their own power. But there are barriers. Gaps in insurance and risk exposures are emerging across the full project lifecycle.

- **Transmission networks are underfunded and overburdened**
  While investment in renewables has been increasing rapidly – nearly doubling since 2010 – global investment in grids has barely changed, remaining static at around $300 billion per year. Transmission companies are caught in a paradox: tasked with enabling the energy transition, but underfunded and overburdened.





Insurance market trends, at a glance

- The pendulum has swung in favor of insurance buyers
- Insurers are competing for business and power and utilities companies are now achieving mid to high double-digit rate reductions for property damage and business interruption (PDBI)
- Long-term agreements and no-claims bonuses are re-emerging, and local markets are gaining underwriting authority, increasing responsiveness and competition
- Softening conditions are extending into the international liability markets, but tempered by the impacts of climate change and decarbonization pressures
- Underwriters are holding firm on exclusions related to PFAS, climate change, and pure financial loss from failure to supply
- Buyers are increasingly turning to captives and alternative risk financing to retain more risk internally and navigate market volatility

Looking ahead

In a soft insurance market, power and utilities companies have an opportunity to optimize their risk strategy, control costs and deploy capital strategically for growth. Data-driven risk information, robust engineering reports, and proactive broker relationships are key to securing favorable terms. Sector-specialist brokers play a critical role in navigating market complexity, balancing incumbent relationships with new capacity, and unlocking optimal insurance programs.

The sector is changing rapidly, and we will continue to deliver insights to help leaders protect critical assets and operations as demand continues to scale up.

If you have any comments or questions, please contact a member of our team. We look forward to sharing more insights in the coming months.

Graham Knight

Chairman of Willis Natural Resources

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Future-proofing transmission: Why the five-year plan needs a reboot

With no transmission, there will be no transition

Key takeaways:

- Transmission companies have been swimming against the tide, facing pressures to supply growing demand, connect renewables at scale, manage intermittency and reliability—all without sufficient capital to upgrade networks
- Events in the U.K., Spain and Portugal cast a spotlight on failures, but transmission remains a profitable risk for insurers who are keen to write risks into their portfolios
- Controlling insurance costs, showcasing risk information to insurers and investing in data and analytics are three key ways transmission companies can build resilience into five-year plans

While investment in renewables has been increasing rapidly – nearly doubling since 2010 – global investment in grids has barely changed, remaining static at around $300 billion per year. In a scenario consistent with meeting national climate goals, grid investment needs to nearly double by 2030 to over $600 billion per year after over a decade of stagnation at the global level.

The need to invest in upgrading transmission networks is clear.

Transmission companies are caught in a paradox: tasked with enabling the energy transition, but underfunded and overburdened.

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Top challenges in key regions:

	Investment opportunities			Key challenges		
North America	Digitalization	Grid modernization	Resilience	Climate resilience	Renewables integration	Aging infrastructure
Europe	DER integration	Cross-border expansion	Smart grids	Climate change	Decentralization	Permitting delays
Asia-Pacific	Renewables integration	Automation	Capacity expansion	Urbanization	Supply chain bottlenecks	Rapid demand growth
Africa/Middle East	Resilience	Renewable deployment	Grid access	Climate vulnerability	Infrastructure gaps	Access & reliability

Transmission companies are in the eye of the storm

Regulation is struggling to balance investments and costs: Post energy crisis, regulators are capping charges and setting tight budgets. This is directly limiting transmission companies' five-year plans.

Capital is largely tied up in repairing and maintaining existing networks and there's little left to invest in new infrastructure.

Capital for investment in new infrastructure is limited: In the U.S., 70% of transformers are over 25 years old, and in Europe, 25–35% of low-voltage lines are over 40 years old. These aging systems were designed for one-way electricity flow and are ill-equipped for modern, decentralized, and bidirectional energy systems.

Existing transmission infrastructure has been operational beyond the original lifespan and capital available to upgrade networks is scarce. This is increasing the risk of plant failure.

Failures of transmission infrastructure hit the headlines this year, increasing the scrutiny on power, utilities and transmission companies.

Lessons learned from outages

After oscillations in power and frequency were felt on the Spanish and Portuguese power systems, three generators tripped, amounting to a loss of 2.2 gigawatts (approximately equivalent to two million homes). The sharp increase in voltage then set a cascade of other power stations tripping across Spain and Portugal, leaving systems out of step with the rest of the European grid. Automated measures to stabilize the situation kick in, but these are "unable to prevent the collapse of the Iberian power system". While a surge in voltage has been identified as the first domino to fall, the force that pushed it remains a question. Automated systems failed to prevent collapse, raising questions about preparedness and resilience.

Moving forward, countries are renewing focus on contingency plans. A failure in Chile in September 2024 is a lesson of how an entire grid can recover with a simple transmission loop.

Lead times are exposing fragile infrastructure to interrupted supply: Transmission networks span entire countries and connect across regions. The infrastructure is major. And planned maintenance and upgrades come with long lead times that are out of transmission companies' control. Transformer waiting periods are reaching 36 months, leaving aging assets exposed to failures and networks exposed to interrupted supply, often without available spares.

The five-year model is out of step: Working in five-year timelines does not match the pace of innovation and growth of an electrified natural resources industry. Major risks to power supply chains, such as natural catastrophes and geopolitical headwinds, are difficult to predict on the long-term horizon. Building this into a five-year forecast is a major challenge, but transmission companies have no option but to align with these timelines set by regulators. And as power companies are appealing to regulators for budget in years to come, it's difficult to make accurate forecasts which are leaving power and transmission companies undercapitalized.

> The costs of five years ago do not match the costs of operating today. Even accommodating for standard inflation, in countries such as the U.S., the new tariffs are increasing the costs of importing raw materials. Global insured natural catastrophe losses surpassed $140 billion in 2024, and damaged critical infrastructure, but these events are difficult to predict, and power and transmission companies budgets were not set up to accommodate for these issues.

Carlos Wilkinson, Head of Power and Utilities, Willis Natural Resources, U.K.

A spotlight on subsea cables

Renewable energy sources like wind and solar are often located far from demand centers, requiring new long-distance transmission lines. Interconnection queues are growing, with more than 2.2 terawatts of interconnection queue capacity seeking to connect to the grid in the U.S. alone.

Demand for subsea cables continues to remain strong, and rightly so. The bi-lateral trade of electricity offers consumers good value and security, something all transmission system operators (TSOs) aim to deliver. Major investments within the supply chain for subsea cables continues to be made with global manufacturing capacity increasing and more cable lay vessels built.

But uncertainty remains.

New projects are pushing the boundaries of technology, with longer cable lengths and deeper waters. Investors and governments are not yet willing to take a chance on new tech with X-Links being the most recent high-profile casualty. Political volatility has also dampened investment appetite after the U.S. government issued a stop notice on the Empire Wind project after billions of dollars had been spent. Fortunately for stakeholders, this was later overturned. One major cable manufacturer has shelved plans for a new factory in the U.S. the moment that the new administration gave an executive order reducing support to unreliable, foreign controlled energy sources. This instability does little for investor confidence.

These challenges are at odds with transmission risks for insurers

Despite the noise of this year's high-profile power failures in the U.K., Spain and Portugal which gained traction as news stories across international media, transmission remains a profitable risk for insurers.

Transmission networks rarely concentrate high-value assets in one place, which limits the financial loss of property damage in any single location. Underwriters maintain a strong appetite to write these risks into their portfolios. Pricing remains competitive for transmission risks, and there are opportunities to build the lowest possible total cost of risk, freeing up capital to invest in infrastructure and growth.

Building resilience into five-year plans: Three actions to take

As pressures on power grids and transmission companies intensify, risk leaders have a critical role in building resilience for the short- and long-term.

1. Control insurance costs

Insurance purchased by contractors during the construction phase becomes obsolete at the operational phase, and exposures can emerge in the transition from construction to operation insurance programs. Increasingly, project owners are taking responsibility for the insurance program for the entire project lifecycle — maintaining control over costs as prices rise. Meanwhile, retention strategies are a useful tool to enable transmission companies to lower their total cost of risk. Transmission companies have a strong track record of successfully retaining risks to reduce insurance costs.

2. Showcase risk controls to insurers

Surveys conducted as part of a robust risk engineering initiative will identify key risks and signpost risk controls to limit exposures. By implementing these controls, brokers can articulate the measures taken to proactively manage risk to underwriters. Backed by data, negotiations can establish an appropriate balance of cost and coverage.

3. Invest in data and analytics

Building certainty into risk programs is a critical component to a resilient five-year operating strategy for transmission companies. Sophisticated analytical tools such as WTW's Global Peril Diagnostic give you the intelligence to better safeguard assets and prepare for losses with live-event tracking and notifications for natural catastrophes, supply chain disruption and geopolitical risks. By looking ahead and working to implement appropriate risk controls on that journey, transmission companies can better future proof their five-year horizon.

After modelling exposures, building the optimal risk strategy is a critical next step. Using an old and siloed risk strategy is unsustainable. A balance of risk retention and transfer is critical to protect assets in the short-term, while building a sustainable business model for the five-year horizon. Data and analytical models – such as Connected Risk Intelligence – can help clients build the most efficient risk strategy that balances risk retention and transfer for the entire portfolio of risk.

Market cycles change and pricing dynamics can swing, but making informed decisions, backed by data, can help transmission companies withstand volatility.

To find out how risk and insurance can help you build resilience, contact:

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Why nuclear power could be the answer to the big data question

Nuclear energy is poised to be a key answer to the power needs of data centers, offering clean, reliable, and scalable electricity to support the growth of the digital economy.

Key takeaways:

- Regulation, though relatively stable, has been criticized for not matching the pace of deployment for nuclear power
- There's white space for insurance to evolve: professional liability insurance at the design stage of nuclear projects; surety solutions for decommissioning at pre-licensing phase; and downstream risks associated with construction
- By engaging with insurance markets at early design stages, investing in risk engineering, and building insurance obligations into decision-making from the outset, nuclear projects can move forward with clarity

In a recent article, Willis specialists examined the exponential growth of data centers, reporting that electricity consumption by data centers is set to double by 2030. Energy required for AI chip production soared by more than 350% worldwide between 2023 and 2024, and this trajectory is showing no sign of slowing.

Powerful AI supercomputers need powerful data centers, and a powerful solution for energy.

Nuclear power is on the table for big tech

Nuclear energy presents a highly reliable, low-carbon, and scalable power source to meet the rapidly increasing and continuous electricity demands of data centers. While it cannot be the sole solution — renewables, natural gas, and battery storage also play roles — nuclear is a critical component of a diversified energy strategy to sustainably power the future of data centers and AI infrastructure.

U.S. technology giants such as Microsoft, Google, and Amazon are big consumers of energy and are looking for ways to generate their own power. Investing in nuclear energy to power data centers is a gateway to securing clean, reliable electricity without intermittency issues associated with other clean technologies such as wind or solar.

Microsoft has signed power purchase agreements with nuclear plants such as Three Mile Island Unit 1, and Amazon Web Services has contracted power from Susquehanna nuclear plant.

For smaller technology companies at start-up or scale-up phases of development, securing capital is imperative for growth. While small/medium-sized companies may not have access to capital to invest in stable nuclear power, large technology companies with robust balance sheets are willing to pay a premium for clean energy and expand portfolios to acquire new technologies – creating a dual incentive to invest in new technology companies. For privately owned nuclear companies dependent on private investment, the supply and demand dynamics of the digital economy is a prime opportunity for growth.

But there are barriers.

Barriers to nuclear project deployment

Regulation, though relatively stable, has been criticized for not matching the pace of deployment for nuclear power. The State of Texas and a technology developer had filed a case against the federal government, claiming the regulatory body is moving too slowly and is inhibiting growth.

Inconsistency in regulation is another major barrier. At the moment, any country for deployment needs to have domestic licensing structures, but countries such as Poland do not currently have a regulatory body or liability regime for nuclear. The question of how to establish and build this expertise is looming over project development. While there are talks about reciprocal technology licensing agreements among various countries to help expedite deployment, reliability concerns are an issue.

Deploying a multi-billion and potentially risky project is a major decision for country officials, and maintaining control over the safety standards and checks is the priority. The challenges of reciprocal licensing agreements mean there's no feasible solution yet and countries remain challenged to establish their own nuclear regulatory bodies.

The way forward: Regulation as an enabler

While Canada hopes to have an operational small modular reactor by 2026, the potential for cost overruns and project delays that have plauged the industry could push this date into the future. Swathes of executive orders signed by the Trump administration are overhauling regulatory body that license and oversee nuclear power plants – removing barriers for nuclear projects in the U.S., which is targeting deployments before the end of the decade.

The main driver? The race to become the global AI giant.

Meanwhile, the Philippines and Vietnam are starting to engage in due diligence to explore nuclear. And in Eastern Europe where the Russia-Ukraine war has amplified issues associated with energy security, companies in countries such as Bulgaria and Poland are actively pursuing gigawatt-scale nuclear projects as a stable and reliable source of

power. These projects use known and proven gigawatt-scale technologies, which alleviate some of the burdens of new and prototypical projects.

There's a need for insurance markets to innovate

Multi-year and multi-billion nuclear projects historically have gone overbudget and over deadlines. Currently, there's not a suitable insurance mechanism to backstop this for investors and funders.

Gaps and exposures are emerging across the full project lifecycle.

Design stage:

Construction stage: Construction markets largely have appetite for nuclear projects, but 10-15 year projects don't always align with insurer appetite or models. Cost overruns and project delays remain core risks, and there's a growing trend of project owners taking control of the insurance program and using Risk & Analytics. "Analyzing each and every insurance program for both insurable and uninsurable risks in a portfolio produces an optimal balance of risk transfer and risk. This can help companies build financial resilience against atypical and changing risks in the energy transition." Aurelia Le Fosse, Associate Director, Strategic Risk Consulting, WTW Italy. Although construction markets are relatively open to nuclear projects, there's still white space for innovation to cover downstream damages of faulty workmanship or parts.

> At the outset, we're starting to see gaps emerging in professional liability for reactor design, which is not available in the market at all yet. A fault at the design stage can delay entire projects, creating long-tail financial stress. Alongside professional liability issues, individual projects now need their own decommissioning trust fund upfront, as mandated by regulators. In particular, start-up companies are unlikely to have the disposable capital to put up or the balance sheet strength or to secure a bond. It's not an efficient use of capital, and a surety solution for decommissioning is a gap in the market for entities that don't have robust balance sheets or existing revenue.

Kate Fowler, Global Head of Nuclear, Willis Natural Resources

When fuel is added to the reactor, construction policies exclude fire, lightning, explosion, aircraft impact and earthquake for the hot zone. This is a point when risks start to belong to nuclear specific markets rather than the traditional construction insurance panel.

Operational phase: Once fuel is added to the reactor and testing is complete – which can take upward of 9-12 months, depending on technology – the world has a handful of markets to cover nuclear risks. The U.S. has two – one for nuclear property and one for nuclear liability, the U.K. has a nuclear liability pool that covers property and liability, and one MGA, as well as two European nuclear mutuals, one each for property and liability. The big question is whether insurers will be able to match the pace and scale of change for operational nuclear when the switch is flipped to connect it to the grid.

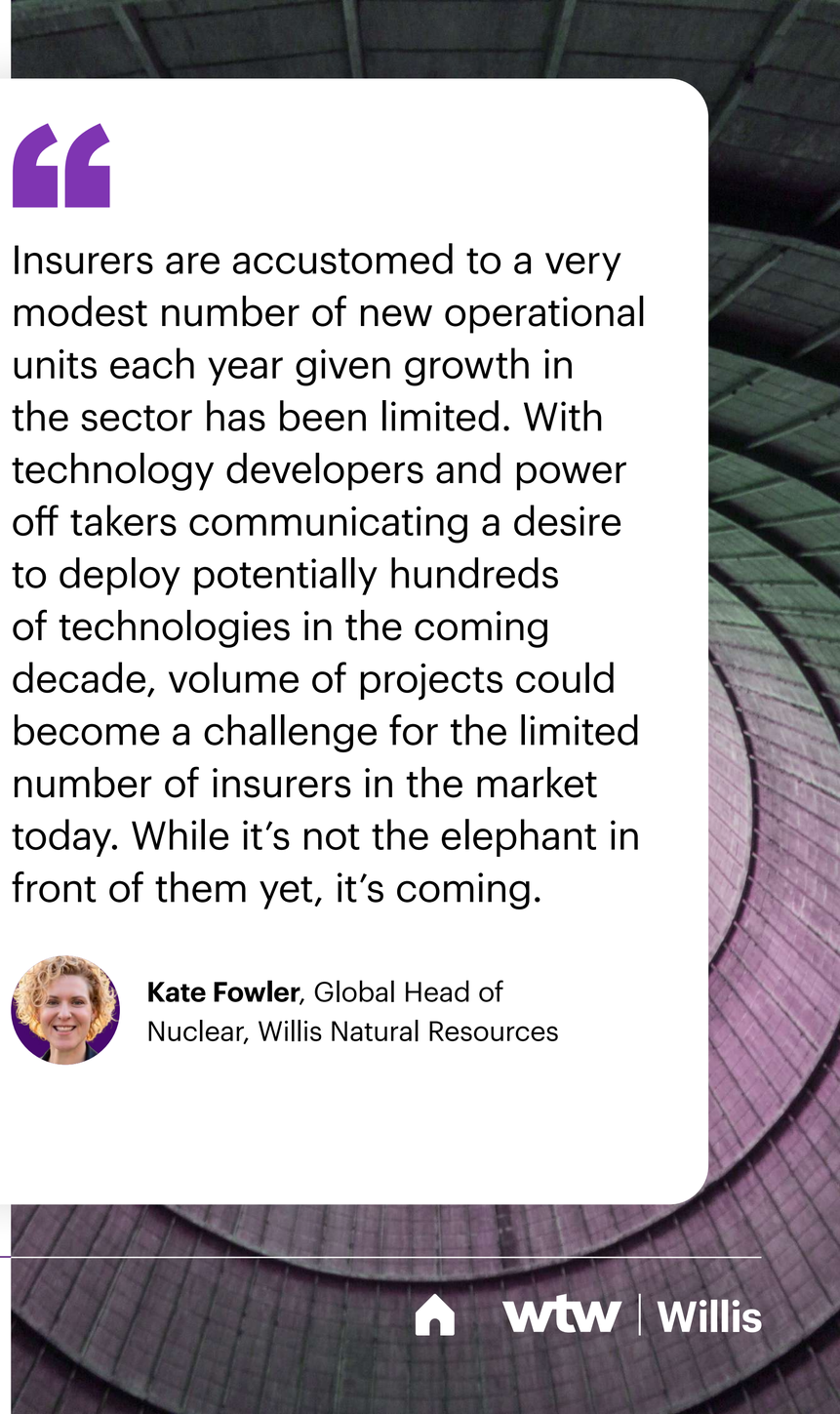
Three key steps for nuclear projects

- Invest in risk engineering. Technologies such as AP1000 are known, but although AP300 uses similar principles, there are parts of it that will differ. Known technologies and known fuels may be used in a new configuration. There's a balance of technology aspects that are new and known, and risk engineering can apply rigor and data to delineate these risks and articulate clear risk information to underwriters.

- Engage with markets and bring insurers along on the journey. The worst-case scenario would be for a project to be designed and approved by regulators, only to be rejected or require modifications for risk mitigation by insurance markets due to decisions such as location, fire protection designs, or other risk details. Bringing an advisor in early enables nuclear project owners to make informed decisions from the outset, knowing the limitations and support insurance markets can offer.

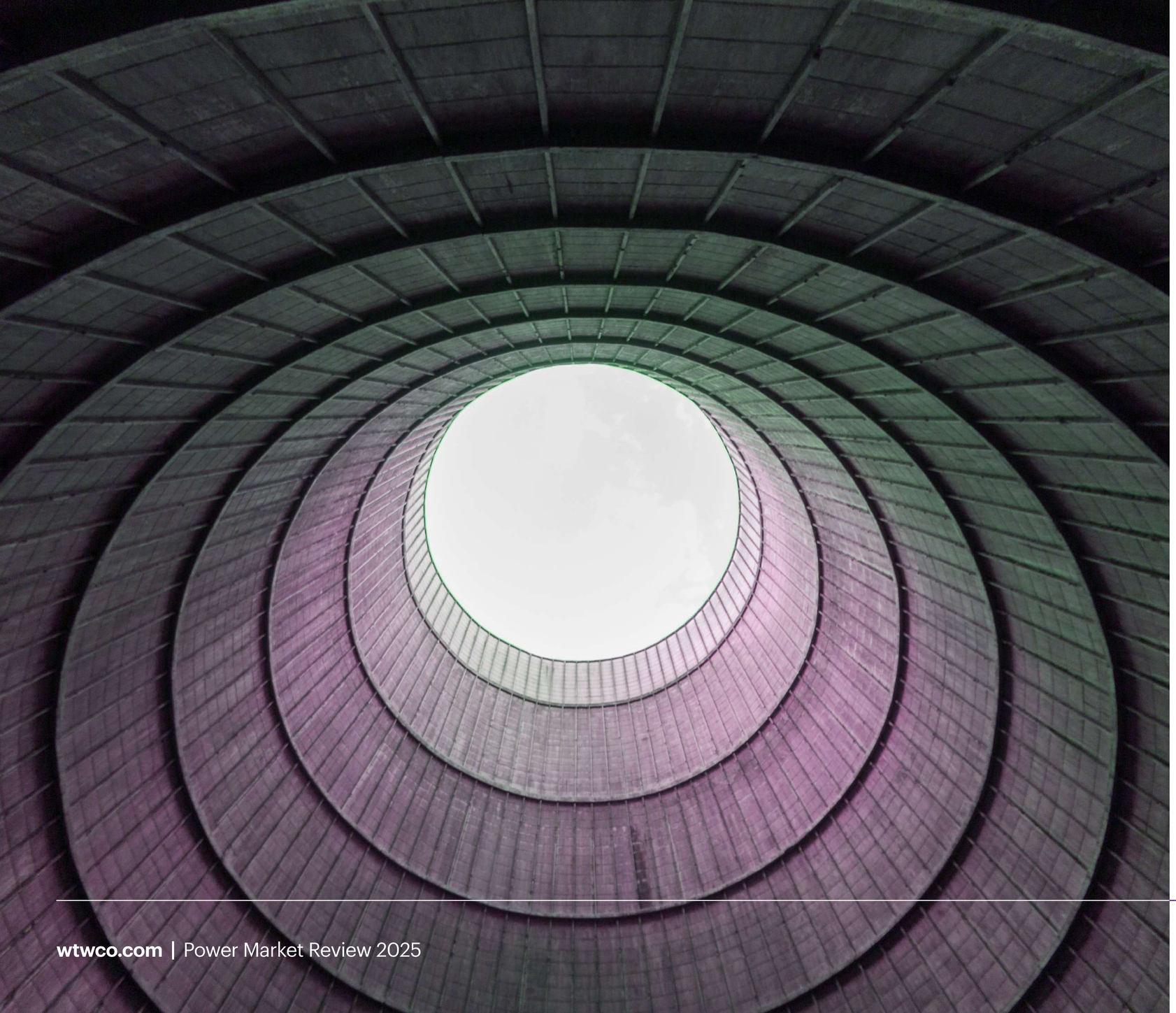
- Pay attention to nuclear insurance requirements. "It's not just like any other risk. In the U.S., it doesn't matter how big or small the reactor is, it's mandatory to buy $1.06 billion in property insurance. In the U.K., £1.2 billion in nuclear liability cover is mandatory, again, agnostic of the size or scale of the project. Looking beyond the technology, to understand the legal insurance requirements is absolutely critical to build in these obligations into financial and operational planning."

In looking ahead, there's potential for Jevons paradox to become a reality. When technological advancements make a resource more efficient to use, driving pricing down, the more popular it will become. For data centers, nuclear power could be this answer. But as demand for data continues to increase, the demand for power will continue to increase in parallel. "If data centers get more efficient, that doesn't mean we'll build less, it means we have an accelerated opportunity to build more" Kate Fowler.



> Insurers are accustomed to a very modest number of new operational units each year given growth in the sector has been limited. With technology developers and power off takers communicating a desire to deploy potentially hundreds of technologies in the coming decade, volume of projects could become a challenge for the limited number of insurers in the market today. While it's not the elephant in front of them yet, it's coming.

Kate Fowler, Global Head of Nuclear, Willis Natural Resources



To find out how nuclear could answer the big data question, contact:

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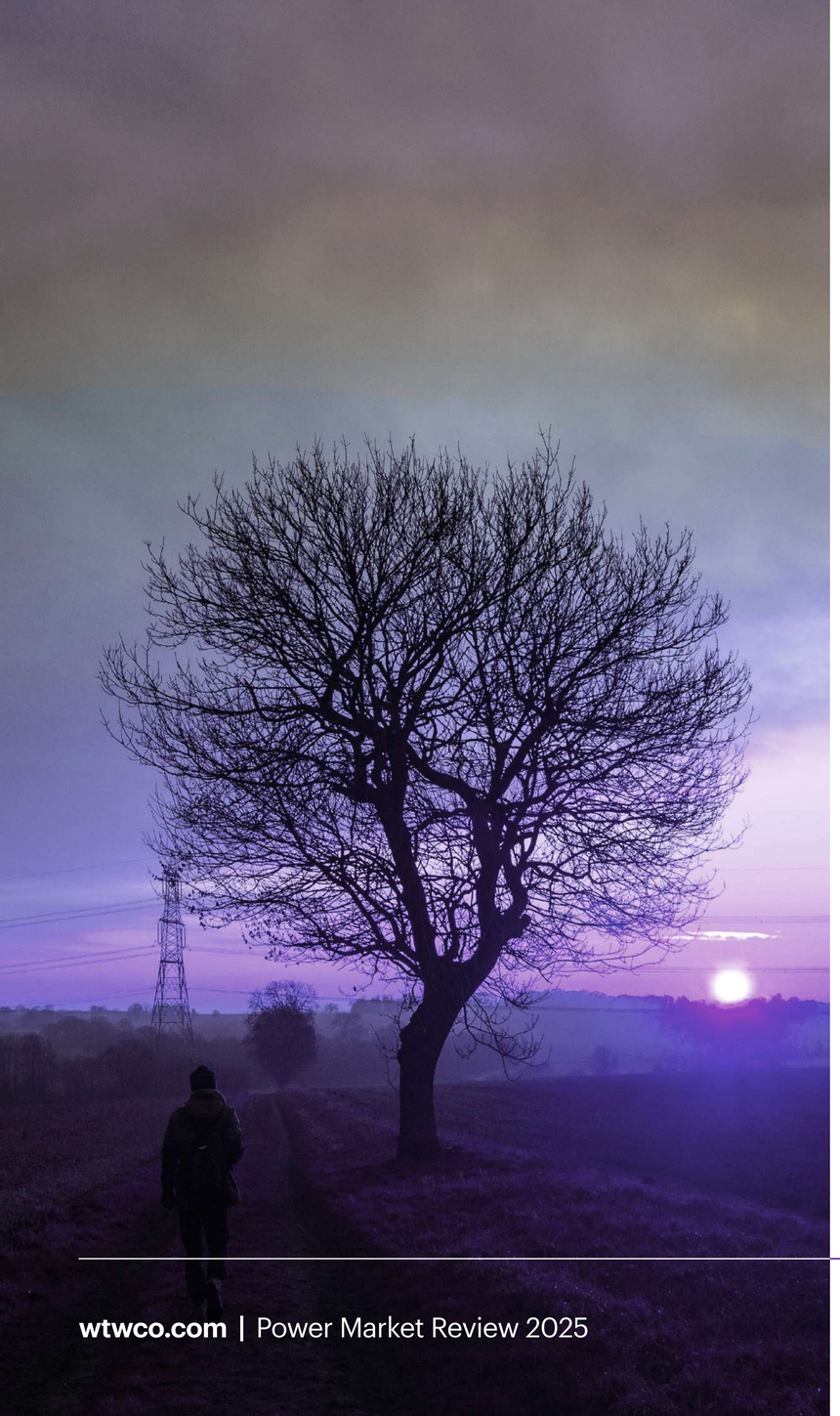
Global Head of Nuclear,
Willis Natural Resources



Beyond double-digit reductions: How power companies can build resilience in a soft insurance market

After years in the grip of a hard insurance market, power companies are finally catching a break. Competition is heating up, capacities are flowing back in, and prices are softening – shifting the balance squarely in the buyer's favor.

Key takeaways:

- In a softening insurance market, power and utilities companies are achieving double digit rate reductions in 2025.
- With white space for innovation wide open for power companies and insurers, strategic risk partners will be critical in creating mutual advantage and resilience.
- Companies should have alignment to long-terms goals, show willingness to co-develop new solutions and openly communicate on challenging risks and opportunities,

Double-digit reductions are becoming the norm

While capacity has increased modestly with an uptick in managing general agent (MGA) activity and insurers re-entering the power market, the real game-changer

is incumbent insurers jostling to deploy capacity and maintain market share. But incumbent insurers can only drive pricing down so far in alignment with management guidelines, and competitor markets are waiting to outpace them on reductions. With competitors ready to undercut, incumbent insurers are offering more capacity to stay in the race.

The dual pressure from both sides – increased capacity and pressure to maintain market share – is driving pricing on a downward trajectory.

Despite significant losses at U.S. power and utility plants, renewal cycles are achieving double digit rate reductions in 2025. Minimum reductions of c.10% - in most cases – can be increased up to 30%[i].

Attritional losses (~$20 million each) aren't shaking the market either. New entrants and surplus capacity are keeping underwriters on their toes. Attritional losses are "not significant enough to have an impact on the rating environment at the moment and underwriters remain pressured to secure business, holding firm on reductions for power and utilities companies" Carlos Wilkinson, Head of Power & Utilities, Natural Resources, Willis, U.K.

The softening market continues to gather momentum.

Soft market credits are sweetening the deal

While terms and conditions aren't changing, long-term agreements (LTAs) and no-claims bonuses (NCBs) are back in play.

> In a softening market, the question remains whether now the time is right to lock in longer-term deals. But we have seen very compelling offers, with year one and two discounts from insurers that are looking to stabilize relationships on good risks in a challenging market.

Carlos Wilkinson, Head of Power and Utilities, Willis Natural Resources, U.K.

> There was an emerging narrative from some insurers that 2025 loss activity might have an impact on the market trajectory of softening rates, but June renewals have shown that although there were more significant events in Q1 than in the whole of 2024, this isn't having an impact on pricing yet.

Michael Buckle, Head of Willis Natural Resources, U.K.

Don't let wordings slip

While soft market credits are a useful tool to optimize long-term risk strategies, sharp wordings remain non-negotiable. As power generators invest in upgrades and new technologies, coverage must evolve too. Irrespective of hard or soft market cycles, wordings should be sharp and aligned to your risk.

"Coverage restrictions are being removed, and while this is welcome news for power and utilities companies, it's important to remember that having superior wordings from the outset ensures clients are able to have confidence in their coverage irrespective of the market's stance." Mark Hiles, Global Head of Power Broking, Willis Natural Resources, UAE.

Local markets are hungry

> During harder market cycles, London markets take control of the book, but we're seeing more authority given to local offices in a softening market. Some markets that have been absent in region for five or six years are starting to reemerge.

Declan Cleary, Power & Utilities Broker, Willis Natural Resources

Underwriting authority is diluted in a soft market.

As a result, London's competitiveness against local markets around the world changes over time, although the rate of change will vary from region to region. With less referrals into London, local underwriters can also become more responsive, reducing the time taken by them to make decisions.

Balance local and international markets

Balancing local agility with international stability is key.

Local markets can have a deeper understanding of local exposures, while international markets provide capacity and greater long-term stability. A global broker that's well connected in local hubs, is able to assess these trends and access capacity where it is most competitive.

Gaps are emerging in insurance programs

Territories such as Qatar and Abu Dhabi are changing their process for tendering for new power projects.

> Currently, engineering, procurement and construction (EPC) contractors are subject to a request for proposal (RFP) process. Under this system, EPC contractors are not guaranteed to win the contract but still need to reserve plant/manufacturing slots from original equipment manufacturers (OEMs) for the premium of $7 million per month. This doesn't make business sense. More recently, project owners are purchasing and reserving turbines and then tendering for the EPC contractors to build with the turbines provided.

Mark Hiles, Global Head of Power Broking, Willis Natural Resources

Buying spare equipment as part of a contingency plan is complicated in a market where capex is tight and lead times for equipment are long. Purchasing items (e.g. turbines, transmission infrastructure and transportation vehicles), separately from different manufacturers leaves project owners with multiple contracts, each with separate insurance arrangements. Any gaps in programs or warranties can leave entire supply chains and projects exposed to delays and disruption, but trying to accommodate all risks in one program is not without complications either.

Assess warranties and insurance covers with a critical eye

Gaps in warranties or cover can derail entire supply chains. Smart structuring is essential.

Warranties are a financial outlay, but in negotiations with insurance markets, warranties can give underwriters confidence to reduce premium. When selecting the right level of warranty consider: will the warranty cover the defective part – such as a liberated blade – or does the warranty cover also the consequential damage?

Differentiate your risk. Data modelling can cut through this complexity and identify the optimal financial decisions to balance cost and scope of blended warranty and insurance coverage.

> It is usually worth purchasing the higher-level warranty, which will be reflected in reductions in from the underwriters.

Declan Cleary, Power & Utilities Broker, Willis Natural Resources

Aging assets are asking complex questions of risk managers

After a certain point in a machine's lifespan, replacing old or inefficient equipment with new parts can ensure the plant remains operational and safe. If upgrades keep profits flowing, invest. If not, rethink risk decisions.

During a power plant's lifespan, coverage for the actual cost value would provide the capital to get the plant back online and the business interruption cover would kick in when the plant is operational once again. But for assets reaching the end of their life, cover for the actual cash value may be secured in isolation and the business interruption cover would be forfeited if the plant is closed. This can create long-tail financial exposures.

Make risk decisions that make financial sense

> For projects that are slated for closure, the future lifespan begins to run into a small number of years. It's important to assess whether insurance cover makes financial sense when balanced with the expected future earnings. Sector specialist brokers can identify the point at which the business is truly indemnified and where to draw the line.

Carlos Wilkinson, Head of Power and Utilities, Willis Natural Resources, U.K.

There's white space for innovation

The soft market hasn't yet sparked a wave of new products, but the opportunity is ripe. Construction-to-operation coverage is showing signs of making a resurgence, although this is more likely to be available primarily for more proven technologies.

For early movers, launching an innovative product could be a differentiator for markets as they compete for power and utilities business.

Identify opportunities to collaborate on solutions

There are early signs that some insurers are working to establish innovative hubs. Recently, a new spur of a well-established insurer has been exploring opportunities to blend existing products under an umbrella solution.

The shift toward thinking of risk as a portfolio rather than silos – and the cost efficiencies this approach can bring – is a refreshing and forward-thinking solution. It's turning multi-line insurance model around by creating risk transfer efficiencies and passing these on to clients. Sector-focused brokers keep their finger on the pulse of market opportunities and bridge the knowledge gap by providing robust risk information to insurers, helping markets to combine and tailor solutions.

> The insurance industry needs to think collectively to move the dial on innovation. As the connection point between clients and markets, brokers are best positioned to articulate client challenges and outline the potential growth opportunities for markets in parallel.

Carlos Wilkinson, Head of Power and Utilities, Willis Natural Resources, U.K.

Future-proofing operating models

Demand for power is increasing exponentially. "To supercharge the supply, new regulation in the U.S. would apply to combined cycle gas turbines (CCGTs) and small modular reactors (SMRs) to enable power generators to hit the capacity needed" Alex Forand, Head of Power & Utilities Broking, Willis Natural Resources, U.S..

As new technologies emerge and regulations evolve, power and utilities companies are keeping an eye on the future. The clean energy transition is gathering momentum despite a recent uptick in fossil fuel activity, and forward-thinking power companies are looking to opportunities to increase efficiency and future-proof their business.

Protect new technologies

Hydrogen retrofits are gaining traction, helping power companies avoid investing in entirely new equipment and keep operating costs low. Carbon capture is another technology poised for growth in the next five years, 43% of power and utilities companies prioritizing this technology for investment.

When partnering with insurance markets, risk engineering articulates accurate risk information about potential exposures and loss scenarios, backed by data. Risks associated with new fuels may not be entirely prototypical, and distinguishing between the portion of proven and prototypical risks will enable underwriters to make informed decisions about cover and pricing.

Thermal coal is coexisting with decarbonization efforts

A number of coal phase outs and gas conversion projects have hit barriers moving from the construction to operational phase of projects. Before becoming fully operational, 72 hours of continuous operation is required to prove operational integrity. But grids are now supplied with more renewable energy, creating peaks and troughs in supply. Power plants that have shifted from baseload operating models to peaker operating models are often unable to run uninterrupted for 72 hours uninterrupted due to intermittent renewable energy being prioritized.

> “Shifting from baseload to peaker operating models, means machines have more stop and starts, which can put more strain on machines, potentially shortening the lifespan of the assets.” Declan Cleary, Power & Utilities Broker, Natural Resources, Willis, U.K.

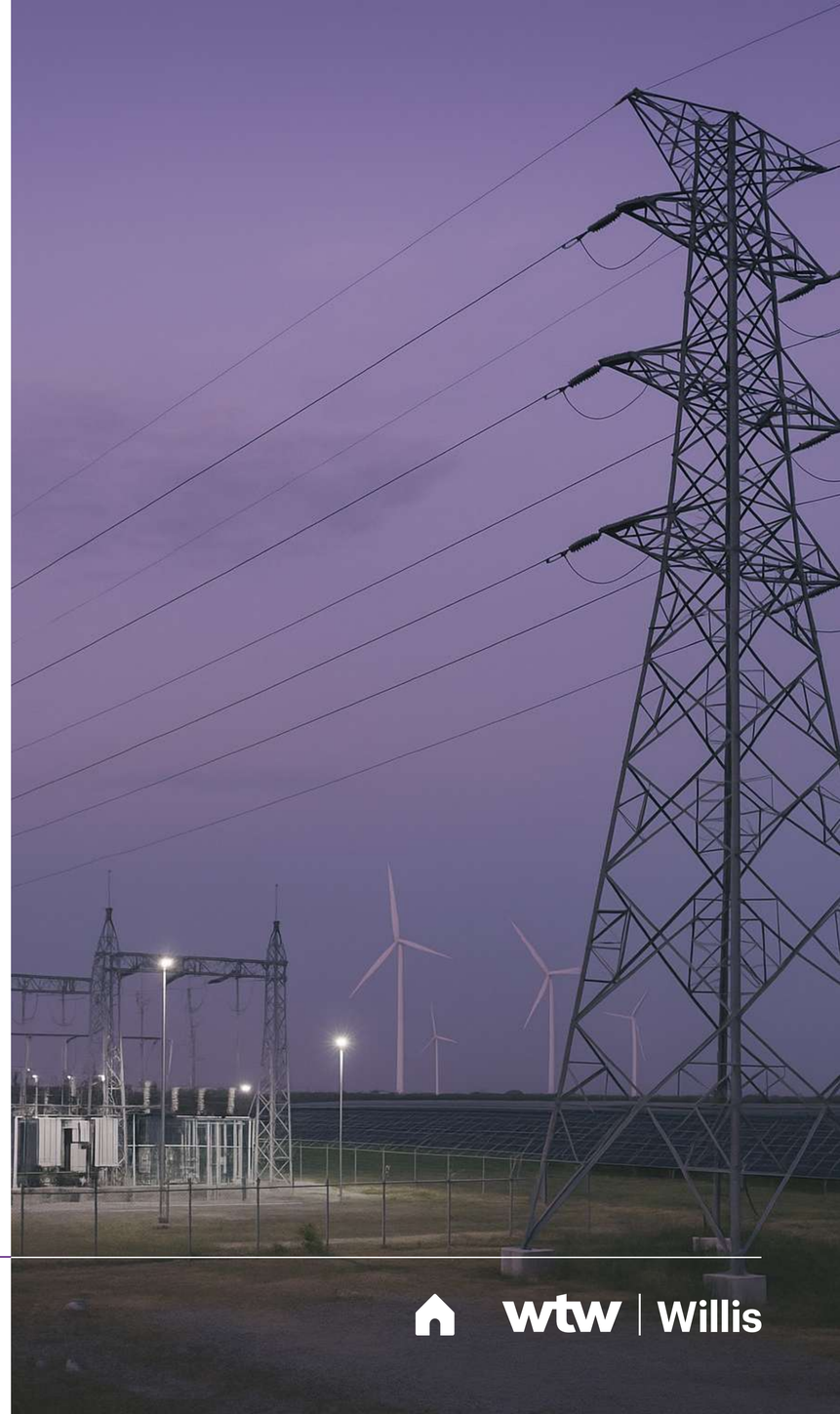
Declan Cleary, Power & Utilities Broker, Willis Natural Resources

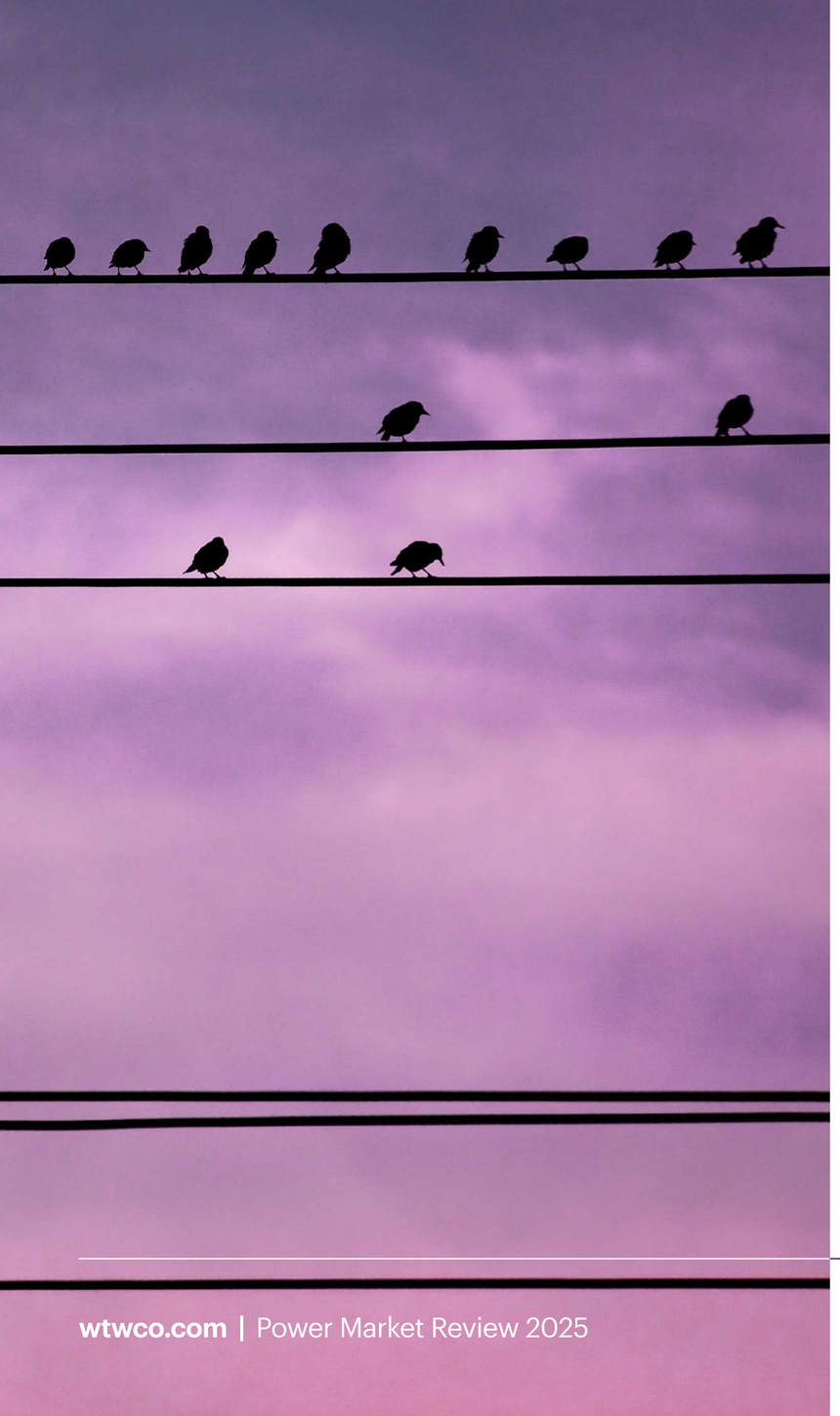
Provide data-driven risk information

Clients with robust risk information have managed to provide a sound and technical rationale to overcome the 72 hours of continuous operation. A strong technical broking negotiation can articulate this to underwriters, backed by risk engineering data.

Profitability for insurers is expected to improve in 2024 and 2025 due to decelerating claims costs, lower inflation, and higher investment yields. But new risks such as cyber threats to increasingly interconnected power grids, terrorism, political risks, and environmental liabilities are driving demand for specialized insurance products.

North America and Europe continue to dominate t he power sector due to mature infrastructure and regulation, but Asia-Pacific is expected to see the fastest growth, fueled by investments in countries like China and India. This regional variation is affecting market conditions and opportunities for insurers and power companies worldwide.





In the year ahead, power companies that partner with a sector-focused broker will be positioned to optimize their risk strategy in the soft market and prepare for any bumps in the road as the demand for power continues to accelerate.

To find out how to prepare for a changing and demanding future, please contact:

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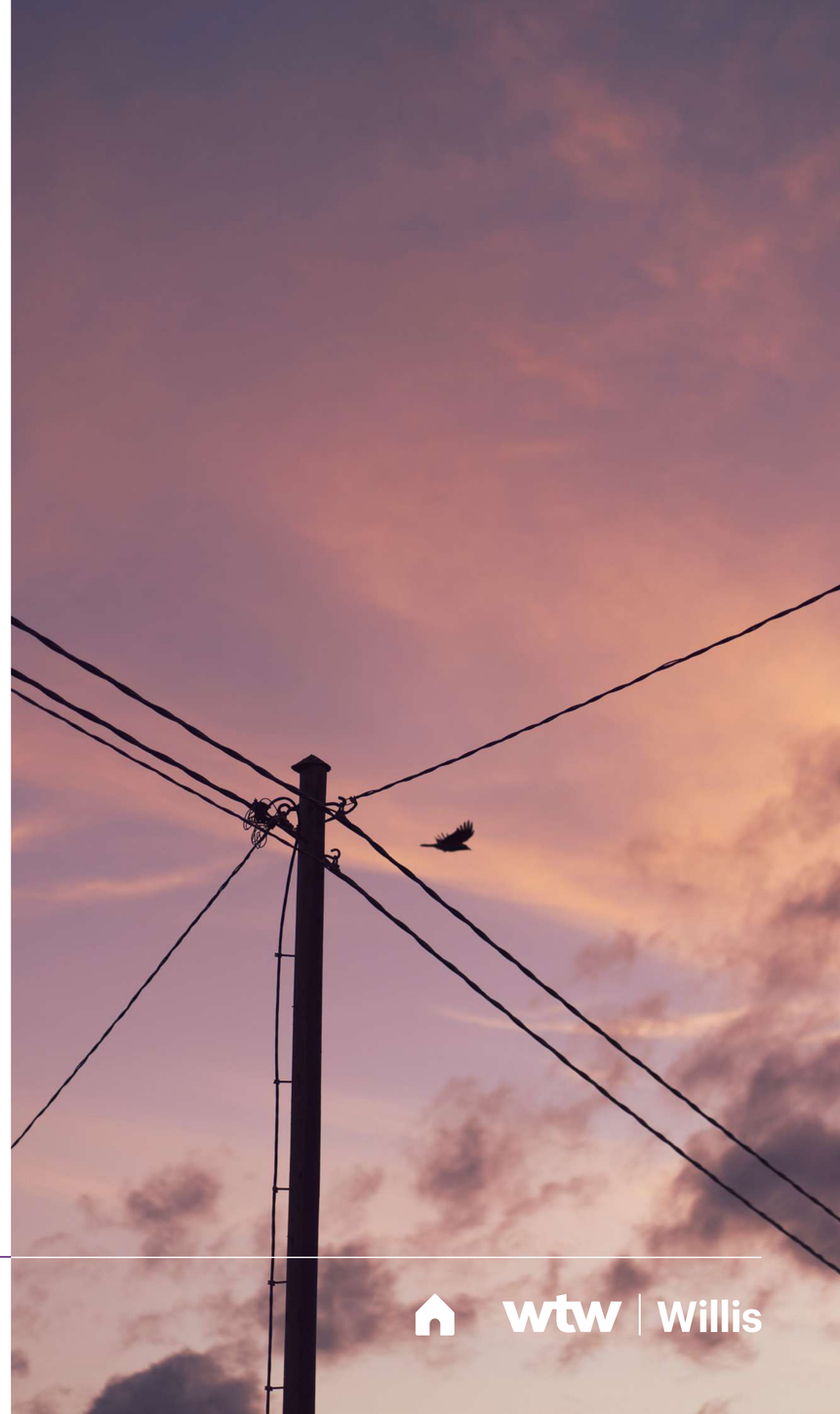
Beneath the surface: Underwriting undercurrents in a softening power liability market

Off the back of a further 12 months of relatively low loss activity, sustained insurer growth targets and increasing market capacity, liability conditions are favorable for sought-after business. But the reality is multi-faceted, and the ultimate focus remains on rate adequacy rather than change.

Key takeaways:

- The international power liability market is softening on the surface, with Lloyd's a third consecutive year of underwriting profit, but changing climate conditions and decarbonization are impacting insurer appetite
- Most of the movement in the softening market relates to price rather than coverage, with underwriters holding firm on wordings related to PFAS, climate and pure financial loss and failure to supply
- While rate moderation is expected in some U.S. casualty lines, the power and utility sector will likely continue to face elevated pricing and limited capacity for high-hazard exposures



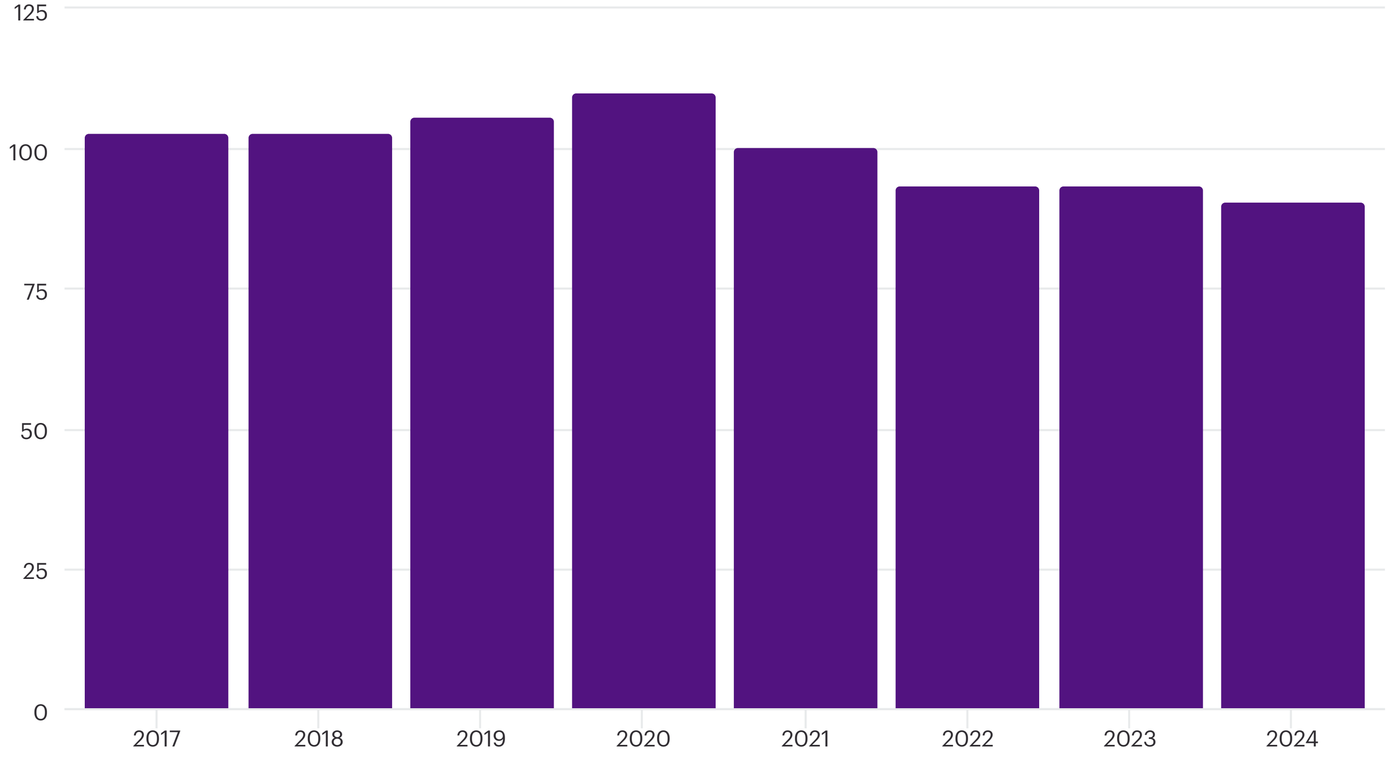
International liability: A favorable but segmented market

The international liability market in London continues to be favorable for buyers, with a small uptick in capacity and a continuation of softening market conditions, leading to greater competition and downward pressure on rates.

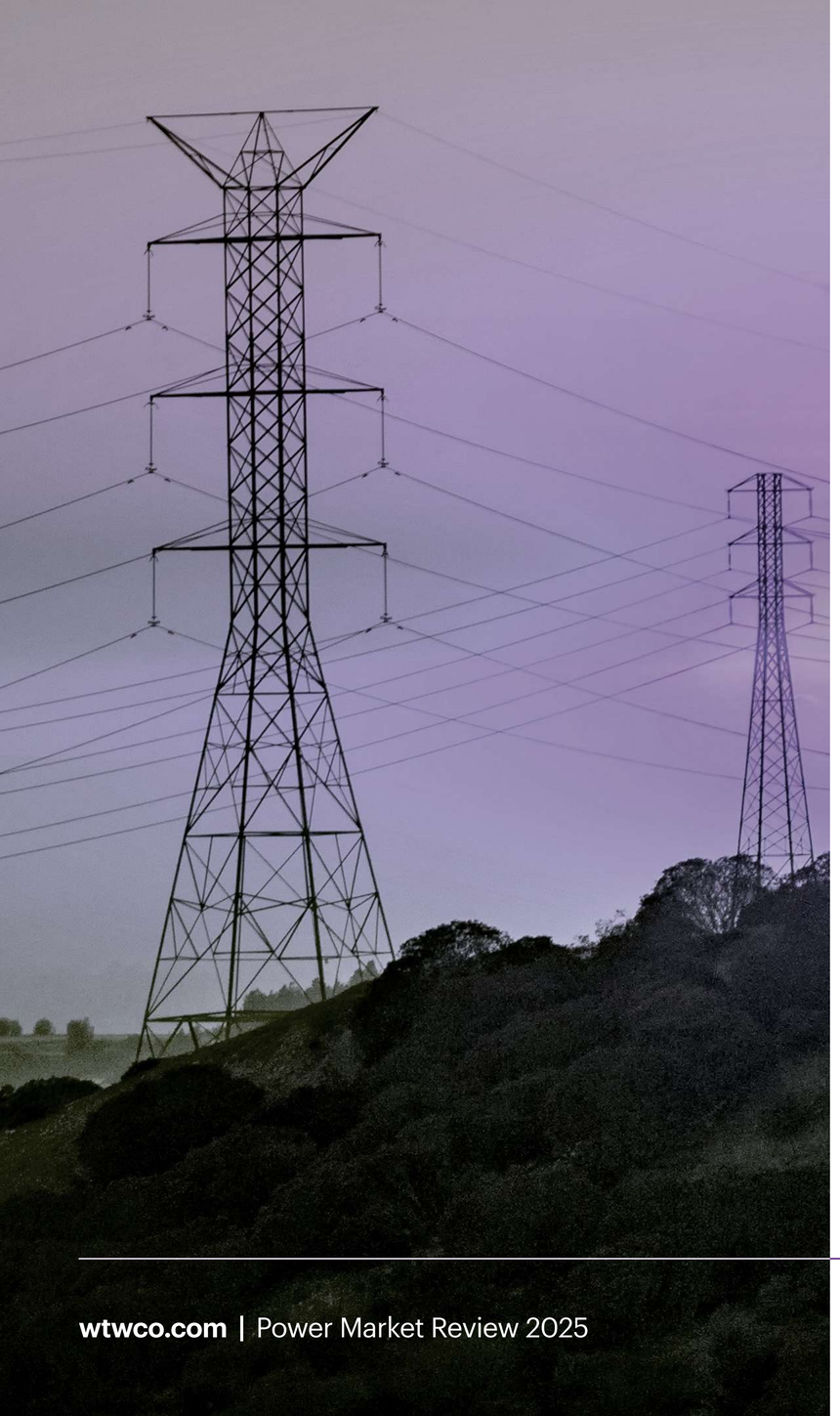
Earlier in 2025, Lloyd's of London announced a third consecutive year of underwriting profit for casualty as a class of business. Lloyd's' segmentation of casualty incorporates other classes such as directors and officers (D&O), financial lines, cyber and accident and health (A&H). The results point to a sustained period of profitability, underpinned by a buoyant underwriting environment, benign loss activity and additional market capacity, which has led to further softening of the market.

Lloyd's result 2024: Casualty insurance segment

Aggregate combined ratio reported by Lloyds casualty segment since 2017



Lloyd's annual reports

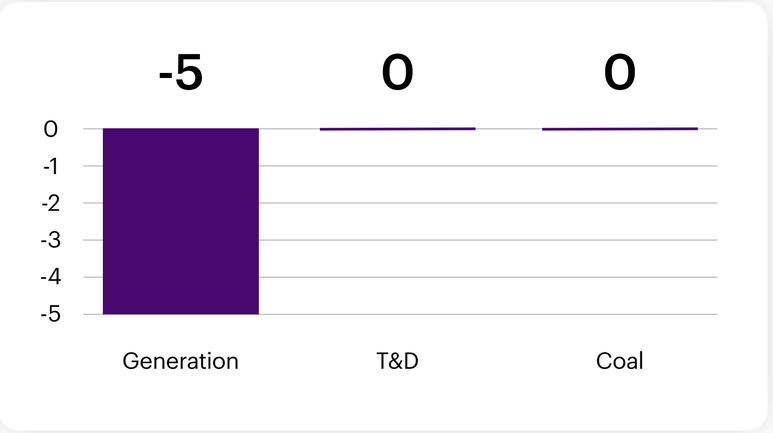


While on the surface, the international liability market appears to be signaling a positive trajectory and seemingly favorable conditions for buyers, the outlook for the power sector is more nuanced. This is best viewed through three lenses:

1. **Power generation:** Ample liability capacity exists for most placements, with in excess of $1 billion capacity available. Most programs can be placed multiple times over, meaning that insurers are increasingly willing to challenge technical pricing, particularly on risks that have had no/minimal losses and are well-perceived in the market default rate change is typically within the flat to -5% bracket but can be even greater depending on the characteristics of the risk.

2. **Transmission and distribution (T&D):** Greater scrutiny and increased information requirements continue to be applied, particularly for placements exposed to wildfire/ bushfire. This is due to increasing frequency and severity of wildfire-related events and is particularly relevant to Australia and Western U.S., alongside a growing focus on wildfire exposures in Southern Europe. Although placements with large losses can be subject to increases, the comparatively restricted pool of capacity, coupled with a more data-driven approach to minimum rates, is balanced by increasing competition from local and London markets meaning that underwriters are typically defaulting to flat as a starting point for loss-free risks.

3. **Coal:** Capacity for liability risks that are predominantly related to coal remains significantly lower than for other power risks, particularly where the risk is new to the market (as some insurers are afforded greater underwriting flexibility for risks that they already participate on). The lack of capacity and reduced competition compared to generation and T&D can lead to opportunistic pricing, however, as program limits have recalibrated in recent years, the default for renewals is typically flat. This said, the outcome can vary significantly depending on the location of risk (with underwriters recognizing the reliance on coal in certain regions, particularly in view of the current global political climate). In some cases, buyers are opting to retain more risk – either via a captive or simply on their balance sheet in the form of greater retentions – where terms are not deemed favorable.



The impact of a changing climate and decarbonization on liability exposures

Against the backdrop of complex and interconnected risk factors, two key evolving exposures are impacting the international liability market for power:

Changing climatic conditions:

Underwriters are paying increasing attention to the uncertainty and increased frequency of extreme weather events resulting from changing climatic conditions and the additional exposure that this creates.

- **Wildfire/bushfire exposures are spreading:** While historically, this has predominantly impacted the U.S. and Australia, wildfires in Greece, Spain, Portugal, Croatia, Italy, Turkey and most recently southern France have expanded the areas of focus for underwriters.

- **Cyclones are elevating failure to supply exposures:** Although typically considered in the context of a property damage/business interruption (PDBI) peril, the increasing prevalence of tropical cyclones, such as cyclone Alfred in Brisbane earlier this year (the first in Brisbane since 1974), has highlighted the elevated 'failure to supply' exposures caused by system damage, as well as increased flooding.

- **Floods and droughts are increasing frequency and type of failures:** An increase in both floods and droughts has demonstrated the hydropower market's vulnerability to climate change as increasing rainfall and melting snow can lead to dam overtopping, as highlighted by the partial Braskereidfoss Dam collapse in Norway in 2023 caused by storms. The inverse can also create risk. A lack of water can significantly impact the ability to generate power, thereby increasing 'failure to supply' exposures.

Power sector decarbonization:
The risk of reduced grid inertia

As well as the risk of overtopping and the inability to generate power, increasing likelihood of floods and droughts can contribute to the heightened risk posed by reduced grid inertia as network operators struggle to maintain steady levels of power across the system. But a greater risk to reduced grid inertia is arguably the growing reliance on renewable energy sources, as demonstrated by the recent power outages in Portugal, Spain and parts of southern France.

With traditional electricity generation, the energy within the generators and motors provide inertia as they synchronously rotate, whereas solar and wind require synthetic inertia as they are connected to the grid without rotating mass. In the pursuit of decarbonization and net zero goals, many countries are pushing their national grids to work in ways that they were not designed to operate, and which are outside the stable inertia limits. This could result in increased frequency fluctuations, heightening the risk of grid instability and the subsequent possibility of a rise in liability claims, particularly when considering pure financial loss and failure to supply exposures.

> As underwriters increasingly focus on evolving exposures within the power sector, there is a continued expectation for insureds to evidence monitoring and mitigation measures to ensure compliance with regulatory standards and demonstrate the highest levels of risk quality.

Matt Clissitt, Deputy Head of Liability and Senior Director, Willis Natural Resources

Consistent coverage: Underwriters are holding firm

The international liability market for the power sector has showed signs of softening, but the majority ofmost of the movement relates to price rather than coverage, with underwriters holding firm on core areas of policy wordings.

PFAS

The incorporation of per- and polyfluoroalkyl substances (PFAS) exclusions into reinsurance treaties, and subsequently some market standard wordings, has led to a widespread and consistent application of PFAS exclusions which are, with exclusions typically being applied by default.

Climate change

Although climate change exclusions are not necessarily commonplace across power generation- and T&D-exposed risks, there is increased scrutiny from underwriters due to ESG concerns for coal-exposed risks. The application of a climate change exclusion, often although not exclusively on the market standard LMA5570 form, is becoming increasingly prevalent.

Pure financial loss and failure to supply

The ability to obtain pure financial loss cover resulting from failure to supply remains under more underwriting scrutiny, including the provision of comprehensive underwriting information. This includes details around third-party contractual exposures and supply agreements and can attract significant additional premium.

Liability insurance buyers have cause to be optimistic

As new capacity continues to enter the market, particularly for generation risks, increased competition and further softening of market conditions is expected. Rates for T&D and coal-exposed risks are likely to stay steadier.

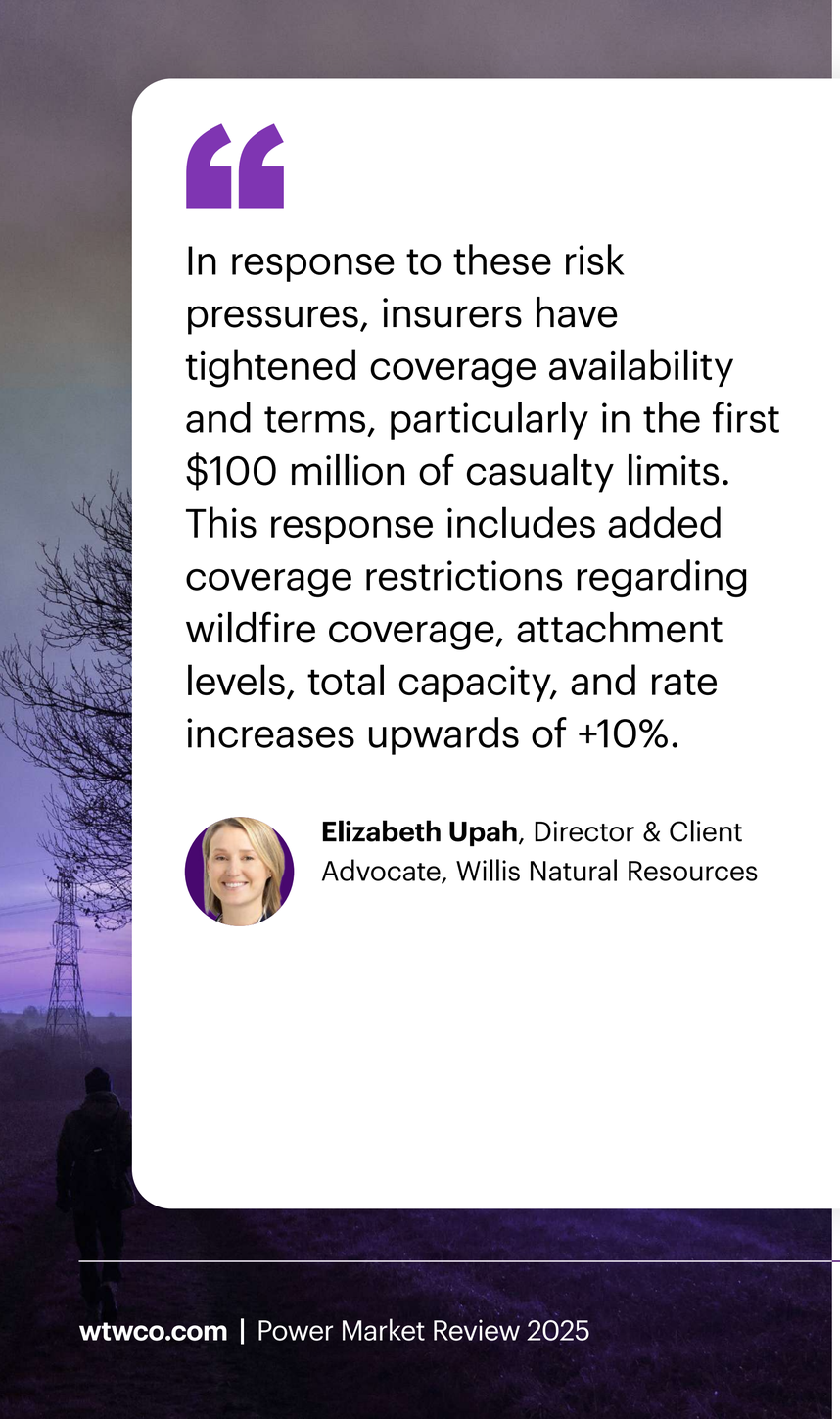
For risks with adequate pricing and clean loss histories, some markets may consider increasing line sizes and/or offering long-term agreements which typically incorporate a small rate reduction in the second year.

The market may see a rise in captive deployment for risks that are heavily exposed to coal as buyers seek to avoid opportunistic capacity and reduce potential fluctuation in capacity demonstrated in recent years.

A spotlight on North America

The power and utilities sector in North America are challenged by exposures that are amplifying casualty insurance market pressures:

- Aging infrastructure: Many utilities are operating with infrastructure that is reaching or exceeding its lifespan. This elevates the risk of catastrophic equipment failures that can lead to extensive liability claims, property damage, and service disruptions.
- Grid modernization: ongoing efforts to upgrade and expand transmission and distribution networks introduce increased construction-related exposures. These projects often involve multiple contractors and third parties, raising potential for injury claims and liability losses.
- Extreme weather: The frequency and severity of wildfires, hurricanes, floods, and other natural catastrophes are increasing due to climate change and directly impacting liabilities.
- Litigation: The sector is vulnerable to nuclear and thermonuclear verdicts especially in cases involving public safety or environmental damage. Increasing regulatory scrutiny and social inflation (rising jury awards) are pushing claim costs higher.



> In response to these risk pressures, insurers have tightened coverage availability and terms, particularly in the first $100 million of casualty limits. This response includes added coverage restrictions regarding wildfire coverage, attachment levels, total capacity, and rate increases upwards of +10%.

Elizabeth Upah, Director & Client Advocate, Willis Natural Resources

To address these pressures, future-ready power and utilities companies are:

- Expanding captive use and exploring alternative risk financing mechanisms to retain more risk internally and reduce dependency on the volatile commercial insurance market.
- Leveraging predictive analytics to model loss scenarios to optimize retention levels and tailor risk management strategies.
- Working closely with insurance brokers to improve submission quality, articulate risk controls, and navigate tougher underwriting requirements. Providing a robust vegetation management plan and any engineering/survey reports performed on site and along overhead transmission lines will be a differentiator and help to enhance the likelihood of obtaining capacity on acceptable terms.

While rate moderation is expected in some casualty lines, the power and utility sector will likely continue to face elevated pricing and limited capacity for high-hazard exposures. But strong carrier surplus levels and improved underwriting profitability offer a glimmer of hope for long-term market stabilization.

To succeed, power and utilities companies must embrace innovation, strengthen risk controls, and engage strategically with insurers.

Partner with a specialist power liability broker to optimize your placement strategy

Headline trends are generally positive, particularly for power generation, but the undercurrent of continued social inflation, concerns around loss reserving and prior year loss deterioration continue to remain a balancing factor for the international liability market.

The value that a sector-specialist broker that understands the technical nuances of the power industry cannot be understated. As well as helping buyers to accurately assess, quantify and mitigate risks that could adversely affect their liability risk, a sector-specialist broker can articulate data-driven risk information to insurers to make a meaningful difference in negotiations and capitalizing on market conditions.

By building a strategy that can balance the value of existing relationships with long-term strategic partners with competitive pressures created by accessing new, non-incumbent capacity, is critical.

To find out how to buyers can best- position themselves your business to unlock the optimal insurance program for their liability risks, contact:

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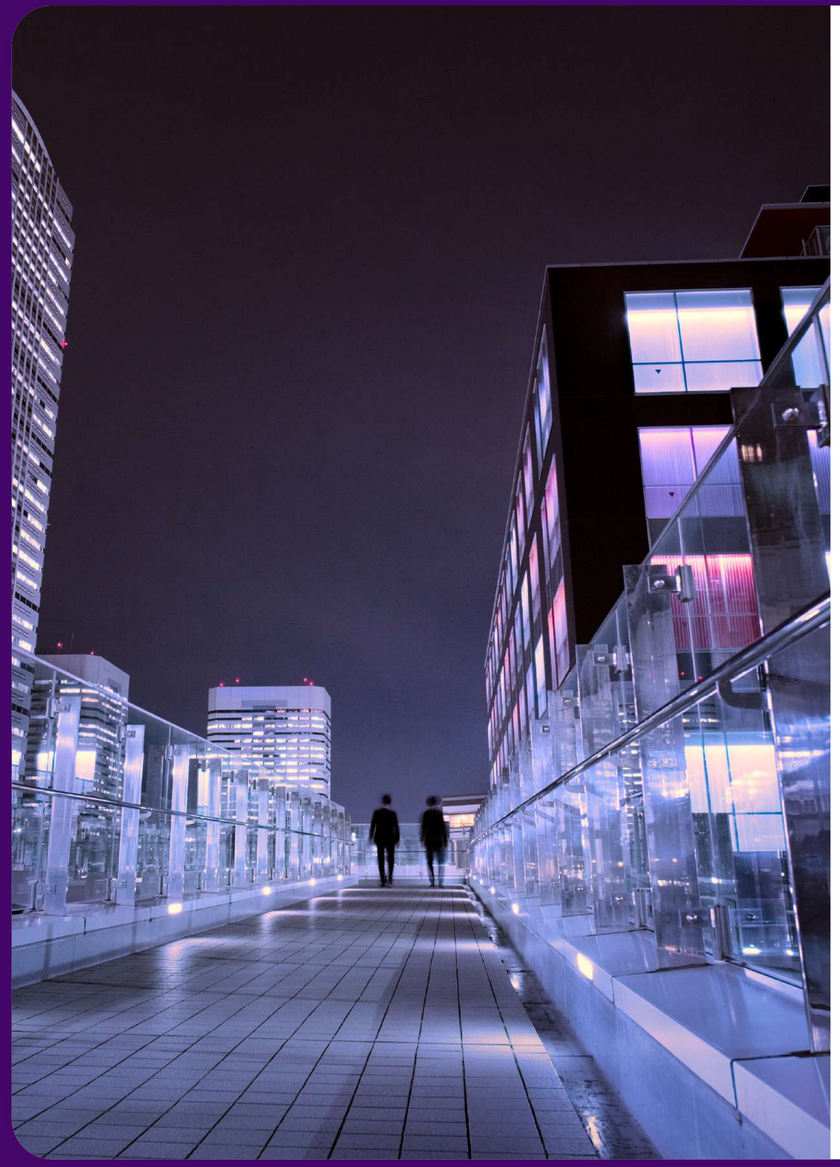
Power hotspots

Key global trends



Power hotspots: Key global trends

Asia

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The power insurance market in Asia remains dynamic, shaped by rapid economic growth, the accelerating energy transition, and an evolving risk landscape. While coal and gas-fired plants still dominate the energy mix, there is a clear shift toward renewables and cleaner technologies, driven by national energy strategies and international sustainability commitments.

The power sector is entering a more competitive and opportunity-rich phase for both clients and insurers. Following a prolonged hard market, conditions have stabilized, with modest increases in capacity and downward pressure on property and business interruption premiums. This softening in market conditions has enabled insurers to offer more attractive, longer-term arrangements, such as two- to three-year long-term agreements (LTAs), providing pricing certainty for buyers.

For well-managed assets with strong risk engineering and favorable loss histories, market competition remains strong. In countries like Indonesia, Vietnam, and the Philippines, where infrastructure development is active, insurers are more willing to deploy capacity, especially for projects sponsored by reputable backed by international funding and/or reputable contractors.

Amid rising geopolitical tensions and supply chain disruptions, insurance buyers are prioritizing stable, fit-for-purpose comprehensive coverage. Looking ahead, insurers that adapt flexibly and integrate innovative risk frameworks, particularly around energy transition trends and emerging technologies such as hydrogen-fueled power will be best positioned to support Asia's energy transition while maintaining sustainable portfolios.

Power hotspots: Key global trends

China

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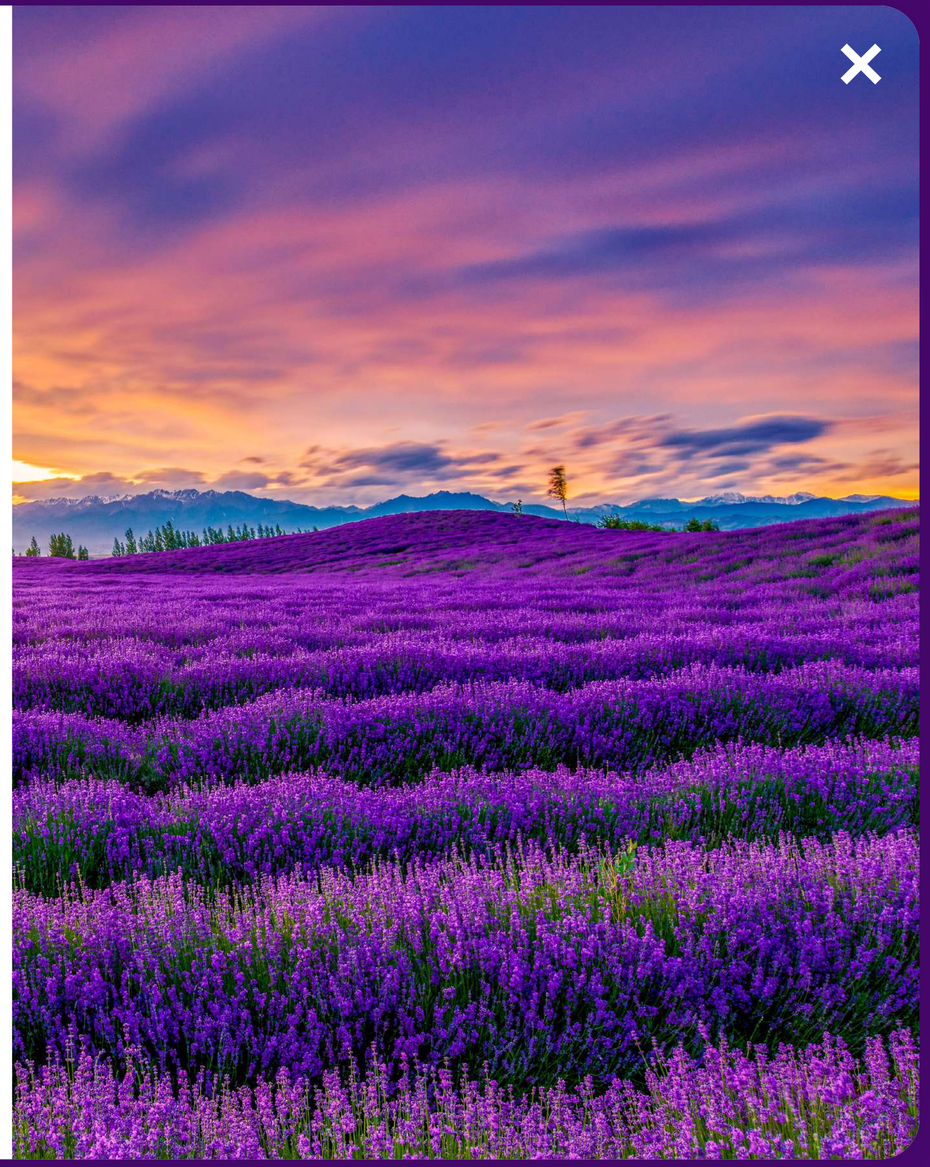
In 2024, the size of power insurance market in China reached approximately 130 billion RMB yuan, a year-on-year increase of about 8.5%. This growth is mainly attributed to the accelerated advancement of electric power infrastructure construction and the enhanced awareness of risk management among electric power enterprises. Data shows that the compound annual growth rate (CAGR) of China's electric power insurance market is about 7.2%. It is projected that by 2025, the market size will further expand to 140 billion RMB yuan.

Property insurance still occupies the largest share, accounting for about 45% of the market. Liability insurance has developed rapidly and comes next with a share of about 30%, followed by construction insurance and credit insurance.

Claims in the conventional power sector in 2024 were relatively stable. However, due to the frequent occurrence of natural disasters in 2024, the power sector has been impacted by extension. But overall, the underwriting policies of property insurance companies towards conventional power enterprises still tend to be stable, while they are relatively more cautious in the renewable industry.



Power hotspots: Key global trends

Latin America

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The power market in Latin America continues to present opportunities and remains highly competitive. There is significant capacity entering the market, especially from non-traditional players, which has led to discounts of up to 30% in some placements. At the same time, more traditional and conservative markets have faced increased pressure to grow and retain accounts, resulting in discounts of up to 10%, provided there is a clear commitment to risk management practices. Companies that articulate technical risk evaluations and robust risk engineering, alongside a favorable loss history, are best placed to take advantage of market dynamics.

Natural catastrophe risks remain a concern across the region. While insurance penetration is still relatively low, certain events have impacted market results in recent years — such as the 2024 floods in Rio Grande do Sul (Brazil), wildfires in Chile, and localized events in Peru and Ecuador.

Markets are also becoming more disciplined in evaluating accounts based on environmental performance, climate action plans, and ESG commitments. With most insurers aligned with the Paris Agreement and under pressure to decarbonize their portfolios, underwriting standards have tightened. As a result, there is reduced appetite for accounts reliant on fossil fuels or those with business models centered around high carbon emissions.

Power hotspots: Key global trends

North America

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The thermal power energy market is undergoing a significant transformation in North America, driven by shifting demand dynamics and evolving energy policies. Despite the global push toward renewable energy, thermal power — particularly from coal, natural gas, and oil — continues to play a critical role in meeting base-load electricity demand, especially in emerging data center demand and increased residential consumption.

These demands continue to force power providers and utilities to upgrade existing assets and find additional power supply to balance the accelerating power needs in North America. With the increased demand, long queue times, and emerging exposures in the capacity auction markets, the risks remain uncertain for the future of power providers and utilities alike.

Power hotspots: Key global trends

Middle East & North Africa

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Conventional (thermal) power generation in the MENA region continues to grow with a 3% CAGR toward 2030. Despite several key countries in the Gulf Cooperation Council shifting their power generation split in favor of renewable energy, combined cycle gas turbines remain to be the main growth driver. International banks are once again actively supporting regional project finance transactions after the global ESG stance regarding thermal power has been relaxed.

Clean adoption has been moving at a slower pace in MENA than was originally expected and 2030 carbon targets face a mixed reality. Countries like Saudi Arabia and the UAE are setting ambitious goals for renewable energy, but current policies need to be addressed to meet these goals.

Significant investments are still being made in oil and gas, with the UAE and Saudi building numerous gas power plants which poses a challenge for meeting targets. While many projects are underway, the overall share of solar energy in the region's electricity mix is still low, at 2.3% in 2023, significantly below the global average of 5.6%. To combat this, some strategies such as the UAE's clean energy plans rely heavily on carbon capture and storage (CCS), and most new CCGT projects now must be designed either with carbon capture, or with the ability to install in the near future. The region is also investing in hydrogen projects, including blue and green hydrogen, which could play a role in future decarbonization efforts, however, natural gas still remains a significant part of

the energy mix, and is seen as the main transition fuel as countries move towards a lower-carbon future.

Technologies continue to open up new opportunities

Meanwhile, data center plans continue to gather momentum. This year, the Emirates Nuclear Energy Company have signed a memorandum of understanding with Hitachi GE Vernova Nuclear Energy for regional small modular reactor (SMR) deployment and we expect other countries in the GCC to follow suit and team up with OEMs.

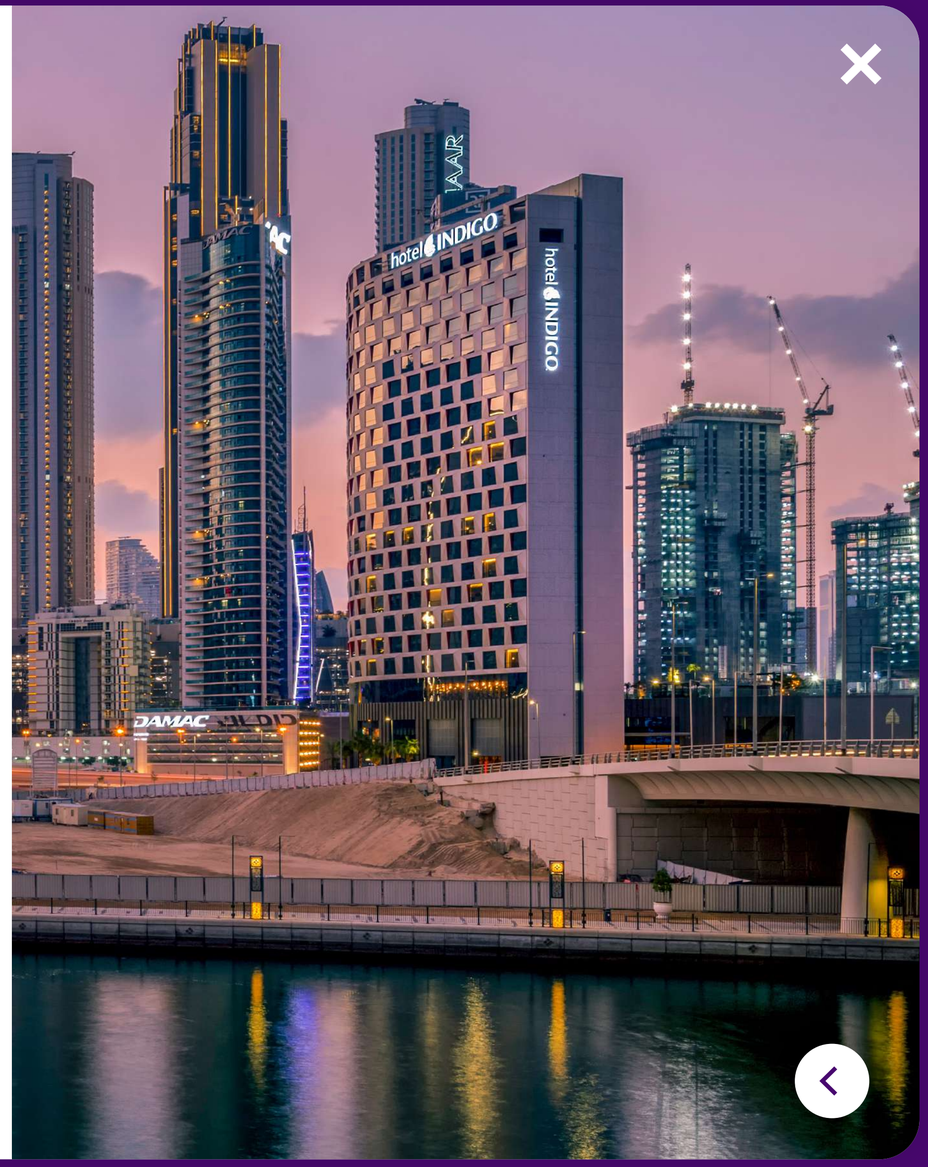
Inefficiencies and costly distribution costs are leading to closure for many multi-stage flash desalination sites in the region. Reverse osmosis technologies are being built much closer to end users, cutting costs and building efficiencies: Regional desalination is shifting to reverse osmosis.

Market conditions

Rate movements are dropping by at least 25% for wellrisk- managed loss-free insureds and in single digits for companies with small claims. Regional reinsurance placements continue to be oversubscribed, and we see markets chasing premium with no expected change of course for the remainder of 2025.

For the reinsurance market, capacity is now hovering around the $2 billion mark for regionally domiciled capacity providers, but working capacity is closer to $1 billion. 2025 saw some markets move into the Dubai International Financial Centre, plus increased MGA capacity.

Lead power markets in the region are regularly deploying maximum working capacity with a firm understanding of the commercial mindset needed to challenge for lead positions on regional power and utilities business.



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Please read

This update analyses our observations of the current global market conditions for renewable energy insurance and the impact this has on insurance buyers. This update is based on our observations of the market for our WTW clients and is not a whole of market review.

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