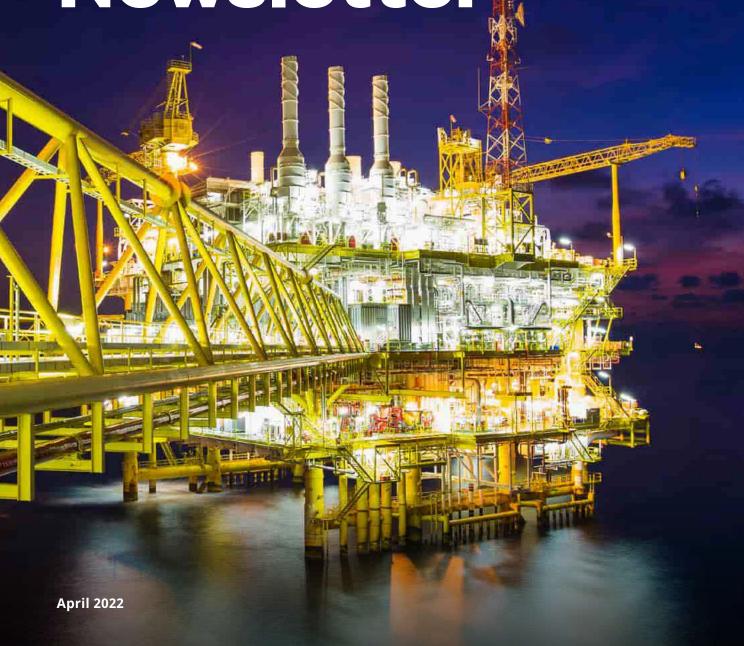


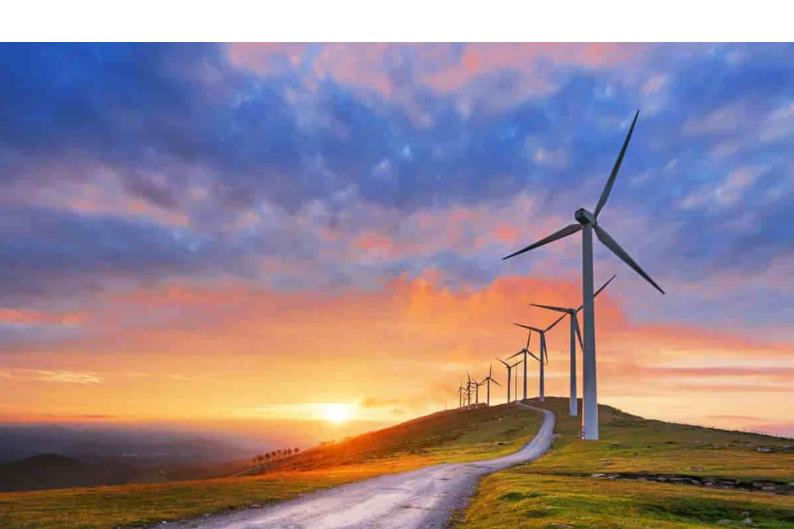
Marsh Specialty

Energy & Power Quarterly Newsletter



This edition of Marsh Specialty's quarterly Energy & Power newsletter includes a review of insurance market conditions for the various industry sectors, as well as regular features including a legal roundup, a look at common clauses, and news briefs. In addition, we profile the 27th edition of the 100 Largest Losses in the Hydrocarbon Industry, 1974-2021 report, and a new ESG risk rating tool designed to help you measure and improve your organization's ESG performance.

John Cooper, Global Chief Client Officer Energy & Power, Marsh Specialty.



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State of the market update

Upstream energy

Market conditions in the upstream sector continue to improve for clients as the capacity surplus drives competition among insurers. This positive trend for insureds will likely continue, at least in the short term, as the sanctions imposed as a result of the Russia-Ukraine crisis have removed about US\$100 million of potential revenue for profitable upstream premium from the market. While insurers may still seek small level rises, the market dynamics are not in their favor.

The much improved commodity prices, and political pressure to increase oil and gas production, may see an increase in premium levels for insurers. Loss of production declared amounts have gone up, values have finally stopped dropping, and there are signs that operators are now keen to begin drilling programs. For insureds, however, the increase in loss of production declared amounts could put pressure on available capacity for some large assets.

Inflation, and increased activity across the upstream sector, may at some point exacerbate claims, but this factor is not currently impacting negotiations.

An exception to the above is coverage for offshore Gulf of Mexico assets, where capacity remains very tight and upstream insurers continue to compete (internally) with other classes for US named windstorm aggregate capacity.

Other exceptions include subsectors where the loss record is poor, such as onshore exploration and production, or for low premium accounts. In these cases, quoted rate rises can often be in double digits.

While the market will likely continue to improve, a large loss or a series of loses could change market dynamics quickly due to the very high vertical limits bought by this sector.

Downstream energy

The first quarter fundamentals are good for both customers and insurers. Although there has been limited new capacity into the market, increased insurer appetite is creating a positive effect. Rates have flattened and the momentum has now moved from leveraging expensive capacity downwards to focus on genuine pressure for rate reductions. At the end of the quarter, there is a clear oversupply of capacity with rates broadly flat to dipping, premium pricing deltas closing, and more alignment in policy terms. Large loss activity for the quarter has been minimal, which has set a positive foundation for the year. A more sustainable trading environment with reduced uncertainty will benefit both insureds and insurers.

More broadly, geopolitical factors and interests are acerbating the supply chain issues caused by the COVID-19 pandemic and this is leading to severe inflationary pressures across the world. Spiking commodity prices will significantly impact asset replacement cost values. There is considerable variability in how those values are currently being declared to the market, and the trend for corrections may go from 2% or 3% to as much as 20%.

While insurers are tolerating some lag on valuation movement, operators should review and assess how inflationary pressures may affect their estimated worst-case loss scenarios and the policy limits they require. Consideration should also be given to how sustained inflation may affect rebuild timeframes, and where applicable, the upward trajectory of earnings and business interruption exposures. Although this may have an impact on upfront insurance costs, as increased costs are factored into sums insured, the cost of underinsurance can be significant in the event of a loss.

Having a robust risk transfer strategy that considers the total cost of risk and tests the pricing models of different options will help operators make an informed decision. Most lead insurers have the breadth of portfolios and engineering capabilities to understand how a customer's declared valuations benchmark. However, where declared values are outside of a conservative margin of tolerance, insurers will likely request an independent valuation. Insurers' terms may make the capacity conditional on independent valuation and/ or include a subjectivity for retroactive premium adjustment. Having current valuations that reflect the cost of repair or replace materials in the current market environment can minimize any potential uncertainty.

In the context of the Russia-Ukraine crisis, many insurers are reconsidering their property damage cyber buyback wordings to ensure that the coverage provided is aligned to that which has been modelled. Generally, as markets are considering restrictive language, operators should consider their direct exposure, as well as across their supply chain, and discuss the impact of any proposed wording change with their broker prior to placement.

Market focus also has moved towards addressing potential ambiguities surrounding coverage scope for non-replaced or repurposed assets. Insurer interest in this topic in part correlates to energy transition as it is not the intention of insurers to fund customers' transition plans, or pay for income loss on time element extensions where no practical preloss indemnity basis exists. However, we have experienced examples where, on an individual basis, customers, advisors, and insurers have worked on bespoke solutions that allow for replacement of assets on a non like-for-like basis, including time element extensions where the indemnity tracks the repurposing of those assets and related earnings.



Midstream energy

The midstream energy class covers a very broad spectrum of operations including gas processing plants, pipelines and terminal operations. Insurances for businesses that fall in this class are written across the upstream, downstream and marine insurance sectors (for ports and terminals). The more benign exposures of pipeline physical damage or gas plants can be written in either the downstream or upstream sectors. More hazardous exposures such as onshore US named windstorm, hydrocarbon blending or processing (excluding refining), and complex business interruption exposures, are written by a limited group of upstream underwriters, or directed to the downstream market. The diverse scope of the class means it is difficult to pin-point specific trends in

pricing or coverages however, it tends to follow the upstream and downstream sector tends. In general, the class does not have the large premium volumes seen in the upstream and downstream sectors, resulting in more volatile loss ratios. An example of this is a recent incident in the US where a pipeline pigging operation burst through a pipeline end-valve causing severe damage to a gas plant. The associated business interruption, written predominantly in the upstream market, is likely to wipe out several years premium for this class. This is likely to result in an upward rating pressure from markets, along with more focus on terms and conditions, especially for business interruption exposures.

Traditional power

We continued to see single digit rate increases during the first quarter for straightforward renewals with clean loss records and no natural catastrophe (NatCat) exposures. We have also seen a number of flat rates and, in some specific cases, rate reductions. This stabilizing was aided by wider marketing to global insurers and restructuring of coverage, with some clients choosing to accept higher retention levels as insurers shift their pricing focus to tightening terms and conditions. For the first time in two years, we have had oversubscription of some risks resulting in a reduction of some markets' desired line on those placements. Markets are now accepting that the rate cycle has changed, and they are no longer feeling the need to constrain their line sizes, while at the same time local and regional markets are looking to maintain their lines on expiring business.

Standalone coal placements are continuing to see increased retentions and further rate increases, regardless of their loss record. As previously reported, there is a continuing trend by insurers to withdraw from any coal participation as they re-align to environmental, social, and governance (ESG) guidelines.

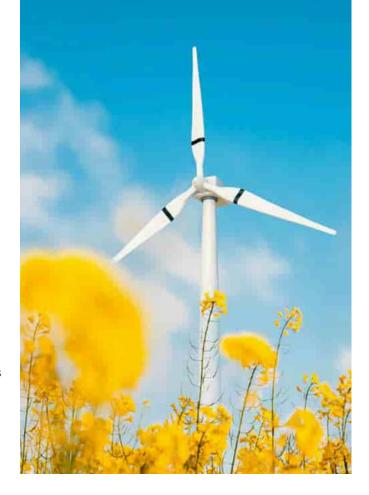
AIG announced its new climate change commitment to achieve net zero carbon emissions by 2050. As a result, AIG will no long insure the construction of new coal-fired power generation risks, and will gradually phase out insuring existing coal-fired power assets. This will continue to increase pressure for this challenging sector as capacity continues to diminish. Given the remaining shallow pool of insurers, the restructuring of programs is now commonplace, alongside the need for a more global placement approach and a reevaluation of the risk transfer strategy of clients.

Renewable energy

Similar to the conventional power market, single digit rate increases were the norm in the first quarter for accounts with a clean loss history. Accounts with key components nearing the end of their warranty periods, or those with historic loss activity, have experienced more significant rate increases. Terms and deductible levels continue to remain stable on operational renewal business following significant changes imposed during the last 12-24 months.

Existing renewable energy insurers have ambitious premium growth targets for 2022, and we have continued to see markets diversify into the renewable energy sector (both onshore and offshore), principally from the conventional power and upstream oil and gas sectors. Importantly, the majority of new markets have entered as follow-on participants rather than providing lead capacity. However, we have seen increased interest from existing insurers to expand their capabilities as a lead market as they grow their expertise and resource.

The key placement challenges are primarily related to construction business (as opposed to operational projects) and many insurers continue to take a cautious approach. This is due to global supply chain disruption leading to inflation pressures on raw materials, as well as increased transportation and labor costs. The result is that insurers are paying greater attention to the accuracy of the declared sums insured, specific breakdown of the costs for key components, and the availability and lead time of key spare parts. Some markets are seeking to load self-insured retentions and pricing to mitigate these factors, as well as the historic poor performance of renewable energy construction business. Policy period extensions to existing construction projects are becoming increasingly commonplace as supply chain disruption leads to project delays. Engaging with brokers and advisors early in discussions, for both new projects and extensions to existing programs, is important in mitigating the impact of these market dynamics, and provides an opportunity to build understanding around the risks and opportunities involved.



The only capacity shortfall in the renewable energy market is for battery energy storage projects. The insurance market continues to struggle to keep pace with the evolution and significant global growth of battery storage, and markets continue to take a highly conservative approach as they build their understanding of the range of technologies and related risks. Insurers' main concerns are related to thermal runaway risk, and scrutiny tends to be aimed at component separation distances as well as fire suppression and protection measures.

In summary, to avoid tougher market conditions, insureds needs to leverage road shows and recent engineering reports to demonstrate commitment to continual risk improvement and management. The Russia-Ukraine crisis has not had a large impact on the power sector, with a majority of the insurance capacity generated within the European market. It is still too early to know if energy sector insurers, who are more likely to be affected financially by the recent sanctions, will turn to the power sector to make up any shortfall of premium.

Terrorism/political violence

The Russia-Ukraine crisis has significantly changed the outlook for the terrorism and political violence (PV) market; the market is bracing itself for significant losses. As the conflict continues, it will take time for these to materialize, but with suggested estimates of US\$3-5 billion worth of exposure in Ukraine, many markets are expecting sizeable claims from individual policies or assets that form part of a global program.

If eventual losses amount to the upper-end of this estimate, they would be the equivalent to several years' worth of premium. In that case, and on the basis that the exposure is

written across both Lloyd's and the London company market, it would be a significant and market changing event.

The terrorism and PV market has historically been a profitable class of insurance and for the time being there remains an abundance of capacity for most countries globally. But it will be important to keep an eye on any tightening of terms and conditions, in particular for war and civil war perils. As ever, rates, coverage, and capacity will come down to the asset location, perils sought, and previous loss history.

Energy casualty

The energy casualty market is still pushing for increased rates, albeit the momentum of increases has slowed down in comparison to 2021. Social inflation and growing jury judgements have continued to play a significant role in market rate dynamics.

Upstream/offshore classes continue to experience rate increases of 10% to more than 15% on like-for-like exposures. Downstream/onshore casualty classes are slightly higher at 15% to more than 20% for static exposures.

The January treaty renewal season showed limited impact on the early 2022 renewals, with flat to low single digit increases. Capacity has generally remained stable over the quarter, as some new carriers have entered the market and there is improved appetite from existing insurers. However, these factors have not yet directly influenced current rate levels.

ESG continues to be a hot topic in the energy casualty market. Many insurers believe climate change is not covered by their existing wordings, whereas others are seeking to include language that specifically excludes all liability going forward. We expect further developments on this over the coming year.

Markets are continuing to seek exclusions for poly flouro alkyl substances (PFAS), which are often referred to as "forever chemicals". These are a group of synthetic chemicals used in a variety of industries such as firefighting foam and oil and gas fracking.

Bermuda casualty

While there was a reduction of capacity in 2020 and 2021 from the insurers who had typically produced line sizes of US\$50 million or more, the emergence of five new insurers during that time bolstered the marketplace by adding up to US\$125 million of new capacity. In 2022, we expect the more established Bermuda markets to continue limiting their energy offerings to US\$25 million, while the newer markets are deploying an average of US\$12.5 million on select energy risks. In general, it appears that improved combined ratios, in conjunction with the capacity entering the market, have had a

positive effect on mitigating rate increases, and in some cases resulted in overall rate reductions for towers.

The heightened focus on ESG considerations continues to be a key factor in risk analysis, with Bermuda markets following the trend to impose pollution exclusions designed to target the emission of greenhouse gases across all program layers. Chemicals continue to be an area of significant interest, especially as multiple geographies seek to add exclusions for substances like methyl tertiary butyl ether (MTBE) and PFAS.

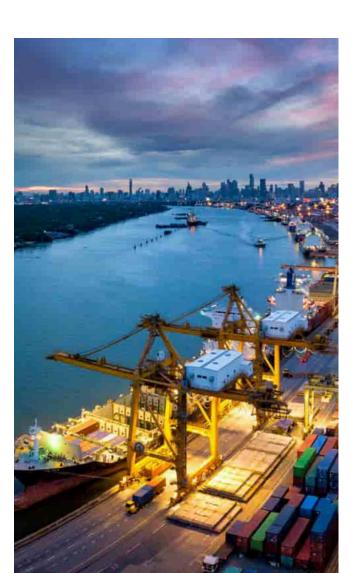


Marine exposures

From the end of 2021 and into the first quarter of 2022, the market continued to stabilize following years of hardening that resulted in rate increases, higher self-insured retentions, and narrowing coverage. Capacity has stabilized following an uncertain few years of disruption caused by withdrawals and new entrants. Renewal rates for good performing accounts have improved to single digits in some cases.

However, there were a number of large losses in the first quarter that may affect the outlook for marine insurers' over the coming year. One example involved a car carrier that caught fire in the Atlantic and subsequently sank. The estimated loss for this incident alone is US\$150-200 million and is expected to significantly impact the market.

As well as losses, insurers are also trying to manage the uncertainly caused by the Russia-Ukraine crisis. An attempt to reduce the longstanding market practice of seven days' notice of cancellation for war risks to 48 hours was successfully resisted by brokers. However, the expanding territories subject to sanctions continue to be closely monitored.



Onshore construction

The onshore construction market remained inconsistent during the first quarter. The outlook for the year ahead will likely see a focus on rates, deductibles, continued scrutiny of information, restriction of particular coverages, and longer turnaround times.

- Rates: Although the pace of rate increases may be slowing down, the direction is unlikely to change until more capacity is available to drive competition. While capital is cautiously considering entry, the scale of new capacity is unlikely to create the excess required to give insurance buyers viable alternatives.
- Cover: The market remains challenging with very limited flexibility. Insureds are experiencing coverage restrictions in general but more specifically in relation to design defect cover, and NatCat restrictions and sub limits in susceptible regions.
- Capacity: During the hard cycle of the last few years, the
 construction market saw the withdrawal of about 25% of
 its global market capacity, which resulted in higher rates.
 Additional withdrawals are not expected in 2022, though
 new capacity at scale is highly unlikely. This will maintain
 the challenging market conditions for the short-term.
- Adequacy of underwriting information: There is greater focus and scrutiny on the quality of information during underwriting assessments. Detailed submissions that clearly articulate the exposure and address insurer concerns will ultimately drive improved pricing and coverage results.
- Emerging trends: ESG considerations are increasingly in focus and gaining traction across the industry. Capacity restraint is accelerating for projects or insureds that cannot demonstrate the required credentials.

Early engagement with brokers and underwriters is key to achieving optimal pricing and coverage results. A focus on supplying quality and extensive information, and involving underwriters at the information gathering stage, is equally essential.

Regional updates

NORTH AMERICA

Rate increases continued across the board in the first quarter, but were generally lower than increases experienced during the last quarter of 2021. Navigating currently available risk transfer options, while creating new solutions, continues to be a challenge. Competition remains in the market and underwriters are proactively requesting opportunities on new and expanded business.

Overriding industry challenges for North American clients include inflationary pressure on interest rates, heightened focus on energy security, loss activity concerns for battery energy storage systems (BESS) exposures, wildfire risk transfer, and negative trends on losses and loss values. Supply chain issues impacting business interruption values, coupled with soft NatCat concerns (excluding wildfire and severe connective storms) are still causing havoc on property rating models.

The impact of each challenge varies by line of coverage. Proactive, constructive discussions are key to negotiating movement on rate, premium, terms, and exposures to obtain reasonable, manageable placement outcomes in a market attempting to readjust.

Higher hazard classes of business, particularly traditional energy exposures, exhibit a continued push for engineering detail on assets, detail on exposures involving PFAS, transitions from coal, and hybrid return-to-work protocols (for workers' compensation and auto classes).

Competition from new capacity launched in the European and Bermuda markets will increase pressure on North American domestic markets. The rate of shrinking capacity in the first quarter is less than trends noted in the last several quarters. An increasing number of markets are open to incrementally adding small limits on a case-by-case basis, as a response to competitive pressure and aggressive growth targets.

Interest in renewable energy risks continues to grow, noted by shifts in capacity and adjusted appetites for both property and casualty lines. To further support this appetite shift, Marsh Specialty launched a North American-based portfolio program during the quarter. This facility offers a solution for small-scale, individual renewable energy exposures not otherwise addressed appropriately by current market pricing or terms and conditions.

Options to transfer risk from insured to self-insured (including captives) are more prevalent in renewal conversations. Many companies fatigued with continued increases, including those with long-standing relationships with insurers, find they can self-insure more efficiently by transferring the exposure and premium from the carriers.

PACIFIC

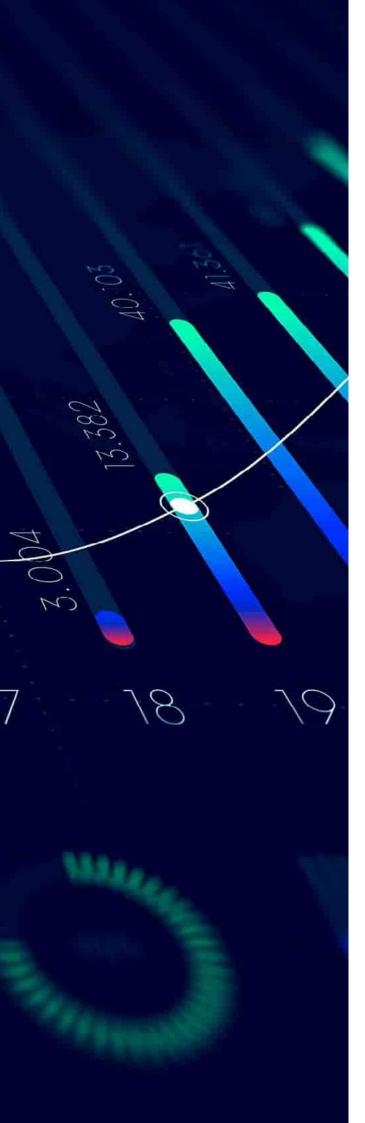
The Australian insurance market has once again been hit by significant NatCat events in the first quarter, with insured losses from the Queensland and New South Wales floods expected to exceed US\$2 billion. While claims have largely been driven from residential, and small-to-medium consumer businesses, the financial implications are likely to weigh heavily on the profitability of insurers in the region. This may potentially slow the recovery of the insurance market, which had shown signs of moderating in the last quarter of 2021.

The first quarter for energy and power related accounts in the Pacific is generally slow, with the largest concentration of renewal activity in the second and third quarters of the year. However, year-to-date renewal results have reflected the continued improvement in market conditions, with most clients seeing low to moderate increases in the range of 5%-10%. The general consensus from most insurers is that pricing has reached pricing adequacy levels, and insurers are content to maintain premium levels for well performing accounts.

There are signs of new capital entering the market, all looking to establish offices in Australia. Some existing markets that had previously stepped away from large, complex risks, have indicated renewed interest. While these markets are unlikely to lead business, the additional capital will help alleviate some of the capacity pressures within the region. AIG's announcement to gradually phase out of existing coal-fired business provides some clarity for established power plant operators in Australia (refer to the "traditional power" section on page 5).

Inflationary pressures and the resulting impact on the validity of declared values, as well as understanding clients' ESG or energy transition plans, are the main themes resonating with most insurers. Almost all insurers want to understand what measures are being taken to ensure that the values being declared are adequate. This may be viewed as insurers trying to find ways to supplement declining premium increases. While this may be partially true, for operators having the right values ensures that limits and sublimits are adequate and appropriate. Similarly, insurers want to understand how clients are approaching ESG within their business. While this is yet to impact clients in terms of securing capacity or pricing, it appears inevitable that this is where the market is heading.

For renewable energy, the first quarter has continued the positive trajectory from 2021. There are significant volumes of wind, solar, and BESS projects either being executed or in the pipeline. The Australian market is gaining more confidence in its ability to underwrite these projects, with steadily increasing competition beginning to impact rating. For existing business the first quarter has seen mostly flat to low single digit increases. Hydrogen is the emerging technology locally, with several small-scale projects being developed. It will take some time for markets to gain scale of knowledge and experience; for now markets are pricing in this uncertainty around their risks and exposures.



ASIA

Upstream insurance markets in Asia continue to remain resilient — to date we have not seen any post-sanction market ramifications, although several insurers have announced plans to withdraw from Myanmar. Underwriters are instead looking optimistically to potential growth factors in light of the oil price uplift, and an expected increase in drilling activity across the region.

Activity in the offshore construction segment has increased, although harder market conditions continue, with increased insurer focus on subcontractor quality, marine warranty surveyor requirements, and projects where the subsea works reflect a notable percentage of the overall project value.

There has been no significant change in underwriting approach over the last quarter for operational risks.

There has been an expected shift from hard to more stable market conditions in the downstream sector, and we expect this trend to continue. Market capacity is increasing, and several markets have offered competing terms in an attempt to ensure favorable account signings. The focus on business interruption continues as inflation concerns impact asset valuation, and underwriters are expecting the sums insured of programs to be adjusted accordingly.

In the power sector (excluding coal-fired plants), operational markets continue to exercise underwriting discipline. However, we are seeing indications of an improved marketplace for clients, with greater flexibility in pricing and capacity on quality plants with good claims records. The situation for coal-related placements, especially newly commissioned coal plants, is extremely challenging. The dynamic has been highlighted with AIG's recent commitment to phase out its participation in coal-related business. This reduction in capacity will further impact both pricing and limits for insureds.

In the renewable energy sector, capacity, coverage, and pricing continue to be challenging for both offshore and onshore placements. This is mainly due to concerns about NatCat exposures that have seen markets experience losses. However, renewable energy holds great potential for new market entrants to emerge, and any new capacity will aid in de-risking the energy transition for stakeholders in Asia.

News brief

The UK terrorism mutual, Pool Re, has completed its Excess of Loss retro program, and has surpassed a record £2.5 billion of limit ceded to traditional and collateralized markets. The program is now the largest terrorism pool reinsurance treaty in the industry, larger than France's GAREAT and the Australian Reinsurance Pool Corporation (ARPC).

The London Joint Rig Committee (JRC) recently held a forum to update brokers and underwriters on their latest activities:

- The JRC is exploring options to rename the committee to encompass the energy transition.
- The JRC has created a number of new sub-committees to reflect the energy transition.
- The proposed revisions to the EED 8/86 form and issuance of "damage to existing property" endorsements for offshore construction are expected later in 2022.
- The sustainability working group has produced a transition questionnaire (JR2021-033) designed to help market practitioners collect information relating to their clients' progress towards energy transition, sustainability, and ESG considerations.
- The offshore wind subcommittee is currently developing a "series loss". In addition, it has issued a cable protection clause (JR2022-034) in response to an announcement in 2021 by a major offshore wind developer about issues with the design of cable protection systems. These issues affected 10 separate wind farms, with potential losses of US\$400 million. It was found that cables were moving across the scour protection, causing abrasion to the cable protection. It is believed that many other developers adopted a similar design. The new clause aids insurers with mitigating future losses and pressures developers to design better cable protection systems.

Lloyd's has released a new report to help insurers and risk managers navigate the significant overlap between geopolitical risks and climate change. The report, **Shifting** powers: Climate cooperation, competition or chaos? is the second in a series produced in partnership with the Cambridge Centre for Risk Studies. The report assesses global political developments in the coming century, and looks at how the global energy transition process could cause changes to risk. The report concludes that while friction between like-minded states could lead to a "green cold war", nation-states are expected to unite through a blend of cooperation and competition to tackle the challenges posed by climate change.

Allianz Global Corporate & Specialty has issued its eleventh Allianz Risk Barometer survey. Cyber, business interruption, and natural disasters are the top three business risks globally in 2022, based on responses from more than 2,650 risk management experts in 89 countries and territories. Pandemic outbreak drops from second to fourth, as companies feel adequately prepared for future outbreaks. Natural catastrophes and climate change rose significantly in the annual rankings as extreme weather events and transition risks mount.

Lloyds has announced its 2021 full year financial results, with an overall profit of GBP2.3 billion (2020: GBP0.9 billion loss) and a combined ratio of 93.5% (2020: 110.3%). According to Lloyd's, its premium rates increased by 10.9%, continuing the trend of 16 consecutive quarters of upward rate movement. Lloyd's believes the ongoing Russia-Ukraine crisis will have a major impact on the market in 2022, and is in close dialogue with market partners to understand exposures. Business underwritten in Ukraine, Russia, and Belarus currently represents less than 1% of Lloyd's global footprint. Direct and indirect claims are expected to fall within manageable tolerances, and are not anticipated to create solvency challenges. Lloyd's gross written premium across all energy lines was GBP1.262 billion (2020: GBP1,265 billion), a decrease of 0.2%. The accident year ratio was 98.0% (2020: 99.2%) however, this was boosted by 6.5% of prior year releases (2020: 8.2%) making the combined ratio 91.5% (2020: 91.0%) with overall profit at GBP71 million (2020: GBP79 million).

According to Lloyd's, the pricing environment across all energy property and casualty lines remained positive throughout 2021. The market stated that the disparity in pricing increases for upstream and downstream lines closed significantly during the year. Downstream lines (including power) continued to report double-digit price increases (albeit to a lesser degree than in 2020) compared to lower single digit increases for upstream property, exploration, and production exposures.

Lloyd's said that a deceleration of pricing increases is expected in 2022. The remedial actions taken by the market in the downstream property and casualty lines will likely see more capacity return in 2022, with pricing, and terms and conditions, expected to improve compared to pre-2019. The abundance of available capacity in the competitive upstream market remains relatively stable.

Lloyd's expects substantial developments in the renewable energy sector, but poor underwriting profitability, particularly in offshore wind, may cause tightening on terms and pricing.

Casualty, which includes general liability and professional lines, as well as cyber, and accident and health, was the only class of business that continued to report a loss in 2021 of GBP17 million, significantly less than the 2020 loss of GBP688 million. Although the accident year ratio was a positive result at 95.6% (2020: 105.2%), prior year loss reserve increases eroded slightly to give a combined ratio of 100.3% (2020:110.3%).

According to Lloyd's, the casualty market has seen significant pricing change in almost all lines of business, particularly cyber, and directors' and officers' liability. There was a marked decrease in average line sizes across most segments as carriers sought to reduce volatility. Lloyd's added that while the market correction is significant, the prevailing sentiment is that pricing adequacy remains in question.

Looking ahead, Lloyd's said there continues to be a growing focus on social and economic inflation, adding that while a lot of the focus has been in the US, other territories such as Australia and Canada are starting to show similar trends across all casualty lines, due to increased regulation, litigation, and inflation pressures in these territories.



Demystifying common clauses

In the offshore oil and gas sector, an operator of an offshore facility will often route its own production through a third-party-owned platform. These 'tie-ins' allow the operator of a remote well(s) to use the third party's production facilities (such as compression) without the need to build its own platform. The third-party platforms are referred to as "host platforms".

Many first-party physical damage policies contain a host platform endorsement that indemnifies the insured for costs contributed to the repair or replacement of the structure, or for rerouting production (to the same capacity) via another location in the event of a total or constructive loss if the owner does not replace the platform. Typically, a host platform endorsement will exclude "sue and labour" and/or "removal of wreck" costs, and will be limited to the lessor of an agreed limit, and cost of the least expensive practical alternative available to the insured. Often there is a clause that requires the insured to not disclose this coverage to the operator of the host platform, to avoid the potential of the host platform owner relying on the insured's policy to cover repair or replacement of the facility.

The above is provided as a general overview of some of the coverage often provided by the aforementioned clauses. This is not intended to be an extensive and exhaustive analysis of the insurance coverage provided by such clauses. The comments above are the opinion of the Marsh Specialty only and should not be relied on as a definitive or legal interpretation. We would encourage you to read the terms and conditions of your particular policy and seek professional advice if in any doubt.

CONTACT US

If readers have particular clauses they would like us to consider including in this newsletter in the future, or have any comments on the above, please contact john.cooper@marsh.com



Energy insurance training courses 2022

Marsh Specialty's energy insurance courses provide specialist energy and insurance training at beginner and intermediate level. They are delivered by experts from Marsh Specialty's Energy & Power practice, along with external tutors such as underwriters, loss adjusters, and risk managers.

Energy Insurance Diploma Course (beginner level)

The foundation level course offers insight into the insurance market and the fundamental principles of insurance, such as insurable interest, indemnity, subrogation, and contribution.

Dates

In person: London, 11-15 July 2022

Delegates are assessed upon completion of each module. Both courses are accredited by the Chartered Insurance Institute in London (CII).

Please contact <u>sarah.verzola@marsh.com</u> to receive a brochure detailing the full curriculum for each course.

Energy Insurance and Risk Management Course (intermediate level)

The intermediate level course provides a broad understanding of the risk management considerations for energy assets and operations, and how policies are placed in the insurance market.

Dates

Virtual (facilitated): 9-19 May 2022

In person: London, 10-14 October 2022



Take control of your ESG narrative

Marsh has launched a new ESG Risk Rating tool that enables you to measure your organization's ESG performance, improve your ESG risks and opportunities, and gain access to risk and insurance benefits.

What is the ESG Risk Rating?

Measuring against more than 10 internationally recognized standards and frameworks — including the Task Force on Climate-related Financial Disclosures, the Global Reporting Initiative, and the European Union Taxonomy for Sustainable Activities — the ESG Risk Rating scores your organization's performance across 18 ESG themes. On completion of the free assessment, you will receive:

- An overall ESG risk score out of 10.
- A risk rating for each ESG component.
- Scores across the 18 themes.
- A risk assessment and recommendations for your controls, reporting, and resilience.

Why complete an ESG risk assessment?

Embedding ESG principles provides a source of competitive advantage to the organizations that do it well. The ESG Risk Rating provides you with a clear framework, and helps you better understand your ESG performance, make more informed investment decisions, and potentially negotiate better insurance outcomes.

Three ways to use your ESG Risk Rating results:

- Use your ESG Risk Rating results to identify your most critical sustainability and climate-related risks.
- 2. Share that output with stakeholders, many of whom are becoming increasingly inquisitive and concerned about ESG risks.
- 3. Work with Marsh's specialist advisors to further develop your ESG strategies.

Additional benefits

Liberty Mutual Insurance is offering its clients in the US and Canada (who opt-in to Marsh's ESG Risk Rating) complimentary access to risk advisory services relating to sustainability and climate-related risks and opportunities.

Marsh McLennan publications

The following are recent Marsh McLennan publications that may be of interest to energy and power companies.



100 Largest Losses in the Hydrocarbon Industry

Marsh Specialty published the 27th edition of this report, detailing the largest property damage losses from the hydrocarbon extraction, transport, and processing industry between 1974 and 2021. Read the article on page 19 and download the full report.



Political Risk Report 2022

Marsh's Political Risk Report 2022 focuses on three environments where even the smallest threat may produce planetary effects: ocean, mineral, and space. These environments intersect with traditional assessments of political risk, which are based on national borders, and permeate the field of action of exporters, importers, and foreign direct investors alike. The mismatch that we perceive between multi-speed recoveries from the COVID-19 pandemic and global expectations, and the consequences of the conflict in Ukraine, could easily unfold across countries, but also across the above-named environments. Download the full report and access an online interactive map that enables filtering by risk category and region.



Transactional Risk insurance 2021

Last year was an extraordinary year for mergers and acquisitions across many regions and industries. Global merger and acquisition activity set new records in terms of the number of deals and total deal value, which exceeded US\$5.9 trillion across 63,000 transactions — an increase of 64% on the previous year. The fourth quarter marked the sixth consecutive quarter with deal values over US\$1 trillion, reaching US\$1.5 trillion in the quarter alone. A combination of favorable deal factors remained intact throughout 2021, including persistently low interest rates, robust uninvested private equity funds, strong strategic investor balance sheets, responsive credit markets, and the rising number of special purpose acquisition companies (SPACs). Download the full report for a region-by-region overview of activity in the transactional risk insurance markets.



Resource Hub: Russia – Ukraine Conflict

The Russia-Ukraine crisis has resulted in tragic losses of life, the displacement of hundreds of thousands of people, and political and economic disruptions on a global scale. Marsh has developed a <u>resource hub</u> where you will find information and insights, along with strategies and guidance, which can help you navigate these challenges. Articles include an overview of risk considerations for different industries, ways to build resilience in times of crisis, how to support employees, and much more. The site has a "frequently asked questions" section that addresses some common enquiries, and you can access replays of webinars that Marsh advisors have delivered.

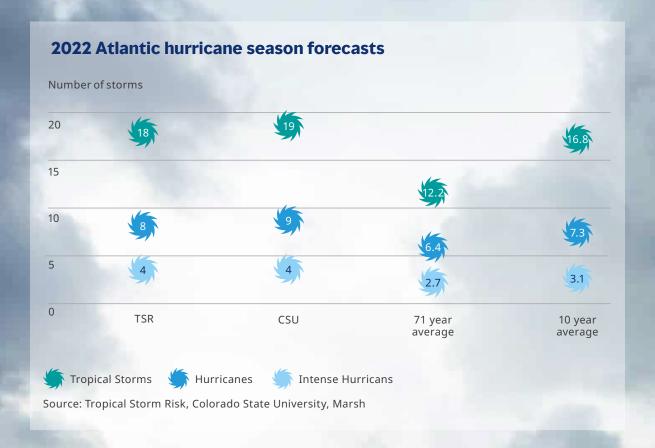
Atlantic named windstorm season update

Both Tropical Storm Risk (TSR) and Colorado State University are predicting above normal activity for the 2022 North Atlantic Named Windstorm season, but lower activity than in 2020 and 2021.

The TSR forecast has risen slightly since December 2021 due to the current La Niña conditions, expected to persist through July to September. These conditions favor reduced trade wind strength, increased vorticity, and lower vertical wind shear over the tropical North Atlantic and Caribbean Sea where hurricanes form. Despite the expectation for a moderately active hurricane season, forecasters remain uncertain about a number of factors. These

include in the forecast strength of El Niño Southern Oscillation, the strength of the North Atlantic Oscillation through spring, and how warm the tropical Atlantic will be in August/September.

The chart below plots April predictions against the long-term (72 years, since records began) and 10-year averages.



Focus on The 100 Largest Losses in the Hydrocarbon Industry

In April, Marsh Specialty published the 27th edition of 100 Largest Losses in the Hydrocarbon Industry (100LL) report. This publication summarizes the 100 largest property damage losses from the hydrocarbon extraction, transport, and processing industry between 1974 and 2021.

The report provides an opportunity to revisit lessons from the past, and identify key issues and trends from large losses, to understand improvements to operations and risk management practices.

There were only two new additions to the largest 100 ranking since our last report in 2020, with property damage costs of US\$200 million and US\$300 million respectively. This equates to the lowest average amount for any two-year period in the 100LL ranking since 1995/96 (see Figure 1). This is a remarkable change compared to the last few editions of the 100LL publication with 2018/19 contributing seven entries (totaling US\$4.1 billion); 2016/17 contributing four

entries (totaling over US\$2.6 billion); and, 2014/15 contributing three entries (totaling US\$1.4 billion).

From a process safety perspective, the pandemic may have indirectly helped in the short-term. However, the medium to long-term impact remains to be seen.

Short-term reasons for a reduction in large loss events

The swift flurry of major losses that some feared at the start of the pandemic did not materialize. This is partly due to sites successfully managing the disruption to established work practices through well-

O1| The cost of the new additions to the 100LL shown on a two-year rolling basis.

The relatively low amount of US\$250 million per year for 2020/21 is highlighted for ease of reference (orange line).



executed business continuity plans. This included changes to staffing levels and management of associated fatigue risk for shiftworkers. There are also a number of factors that may have helped to mitigate potential process safety risks:

- A "back to basics" approach by sites. New initiatives and changes were put on hold and steady operation was largely prioritized over optimization initiatives.
- Planned turnarounds and major project commissioning works were postponed as sites struggled to source key materials and contractors — or where complex operations could not be completed in a "COVID-19 safe" manner.
 The reduction in both maintenance work and transient operations will have likely helped avoid a potential root cause for process safety incidents.
- Many assets, particularly in upstream and refining, operated well below their maximum safe operating limits.

Medium to longer-term considerations and impacts

Moving forward, there are a number of potential risks that will need to be carefully managed to prevent potential "delayed losses". Operators should consider the following:

 Postponing turnarounds has meant that much planned inspection and maintenance work has been delayed.
 If the risks associated with deferring this critical work have not been properly managed, or if the backlog is not cleared in a timely fashion, this could be a common cause of losses in the coming years.

- Assets being operated at minimum safe throughputs can have a negative impact on asset reliability, if not properly managed. Equipment may foul more easily, furnace tubes may coke more quickly, and rotating equipment, such as compressors and pumps, may be more prone to breakdown after periods of operating at minimum throughputs.
- Many sites suspended emergency response drills during the pandemic due to challenges of working to COVID-19 safety guidelines. This may mean that emergency response teams are not as familiar with site-specific response plans, which could hamper any mitigation efforts, in the event of a fire or explosion.
- A number of sites utilized remote work practices to complete scheduled hazard and operability studies (HAZOPs), project safety studies, or risk assessments as part of the management of change (MoC) process. If not properly managed, the quality of such safety analysis may be compromised.
- Some organizations may have experienced a significant turnover of staff, including redundancies, since the start of the pandemic. The loss of experienced staff, particularly in any safety critical positions, will pose a clear risk if not adequately managed.
- The financial impact of the pandemic on balance sheets may increase merger, acquisition, and divestment activity in the coming years. The disruption from a poorly managed ownership transition can precipitate process safety events in various ways.

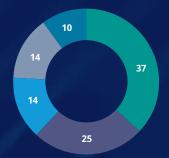
Number of incidents by sector



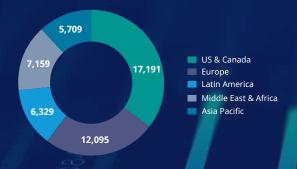
Value of incidents by sector (US\$ million)



Distribution of incidents by region (number)



Distribution of value by region (US\$ million)



SECTOR SUMMARIES

Gas processing

Seven property damage losses associated with gas processing feature among the 100 largest losses — the most recent was a fire that occurred in Norway in September 2020.

The properties of LNG mean that the risk of internal corrosion is greatly reduced and significant global experience with the design, construction, and operation of LNG facilities has helped contribute to the relatively limited incidents of very large losses in this sector. The September 2020 fire reportedly occurred because, "the anti-icing heat exchanger in the air inlet was used outside of its intended area of application." This serves as a reminder that the potential does exist for high-consequence losses in this sector due to their complexity and value.

Petrochemical

There have been no new additions to the 100LL from this sector over the last two years. However, there have been some notable petrochemical losses, including two in South Korea: Daesan in March 2020 and Yeosu in November 2020.

Although it doesn't qualify for the 100LL, a major explosion at a petrochemical plant in Tarragona, Spain, in January 2020 resulted in three fatalities. One of these fatalities occurred several kilometers from the site, caused by a one-metric ton projectile. This demonstrates the potentially significant third party liability exposures for this sector.

A number of factors contribute to petrochemical plant loss history. They often contain a concentration of high-value equipment and machinery, typically operate at high temperatures and pressures, and require the careful control of potentially violent chemical reactions. However, materials processed at petrochemical plants have normally been preprocessed (for example, supplied by oil refineries), meaning that most contaminants in the feedstocks will have been removed prior to receipt, making them less susceptible to several corrosion mechanisms.

Refining

One new refinery loss was added to this edition of the 100LL, and refinery losses now make up 37% of the largest losses. The incident occurred in Cape Town, South Africa, in July 2020.

In general, oil refineries are a group of aging assets. Older assets have often been subject to both expansion projects to increase capacity, and retrospective installation of high-value, high-conversion assets. Together these have resulted in higher concentration of value at sites. Refineries process crude oil and therefore, have a far more dynamic and broad feedstock range than the other asset classes.

The combination of aging assets, increased concentration of value, and diverse feedstocks, are all likely to have contributed to the fact that this sector makes up the largest proportion of the 100LL.

Terminals and distribution

Only seven losses associated with terminal and distribution operations feature among the 100LL; the most recent occurring in 2005. The physical layout of most terminal and distribution assets, coupled with the value of the plant and its equipment, means that few sites have enough concentration of value to result in the very largest physical damage losses.

Upstream

The upstream sector accounts for 23% of the 100LL. However, it's important to remember that the report only covers property damage, and does not include the additional costs of well control, or third-party liability. The total third-party liability claims for the Macondo loss in the Gulf of Mexico in 2010, are understood to be more than 40 times the value of the associated property damage loss.

The most recent upstream loss to be included in the 100LL occurred in February 2016 and the five subsequent years mark the longest period without an upstream addition to the 100LL ranking since the period 1993 to 2001.

FAST FACTS



With a total of 37 losses, the refining sector has the highest proportion of losses, followed by petrochemicals with 26 losses, and 23 losses in the upstream sector.



It has been over five years since a major loss in the upstream sector, the most recent incident added to the top 100 was in February 2016.



Six of the 20 highest value losses, and 19 of the 100 losses, occurred in the last 10 years.



32% of losses resulted from an explosion; 24% from mechanical failures; and 13% from a natural catastrophe event.



North America and Europe recorded the most losses, with 37 and 25 losses respectively. Latin America, and the Middle East & Africa regions both have 14 losses; and Asia Pacific has recorded 10.



The adjusted property loss values range from US\$2.3 billion to US\$189 million.



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