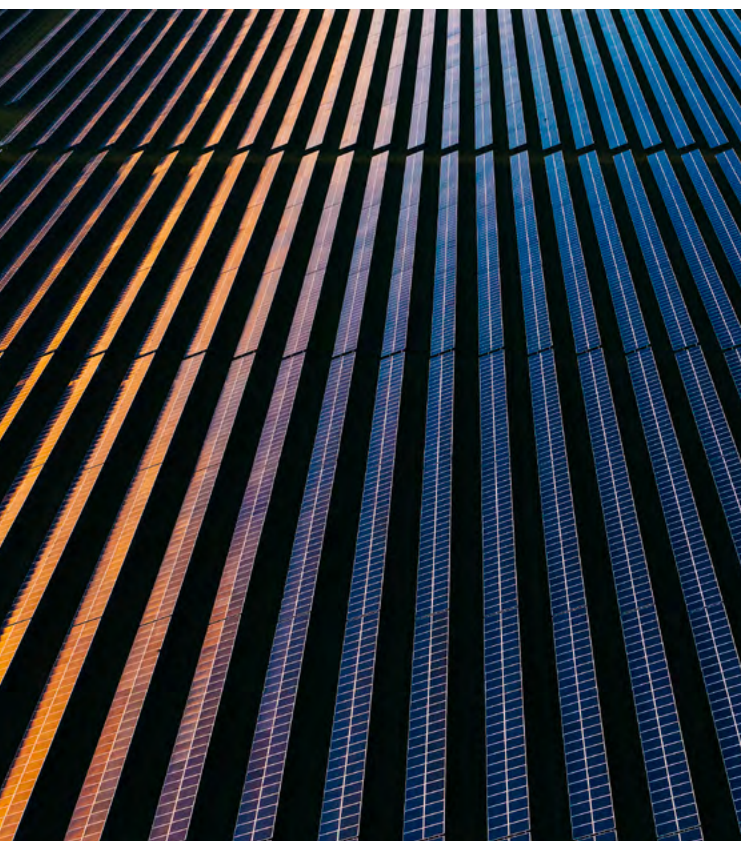


Insurance products to support the transition

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The Marsh McLennan Risk Landscape

Governments, investors, public entities, and private businesses are working hard to fulfill their commitments to tackle climate change and decarbonize the economy.

Achieving these goals will necessitate trillions of dollars in investment but current capital deployment falls short. Concerns about associated risks are a significant barrier to scaling projects and achieving planned results.

Insurance has been a neglected piece of the puzzle. The insurance industry needs to work more closely with project developers and financiers to help mobilize capital and scale the deployment of new low carbon technologies. Traditional and innovative insurance solutions are available to mitigate risks and facilitate a resilient climate transition. Marsh McLennan's risk landscape pinpoints the opportunities where insurance can play a role.



How to use this document

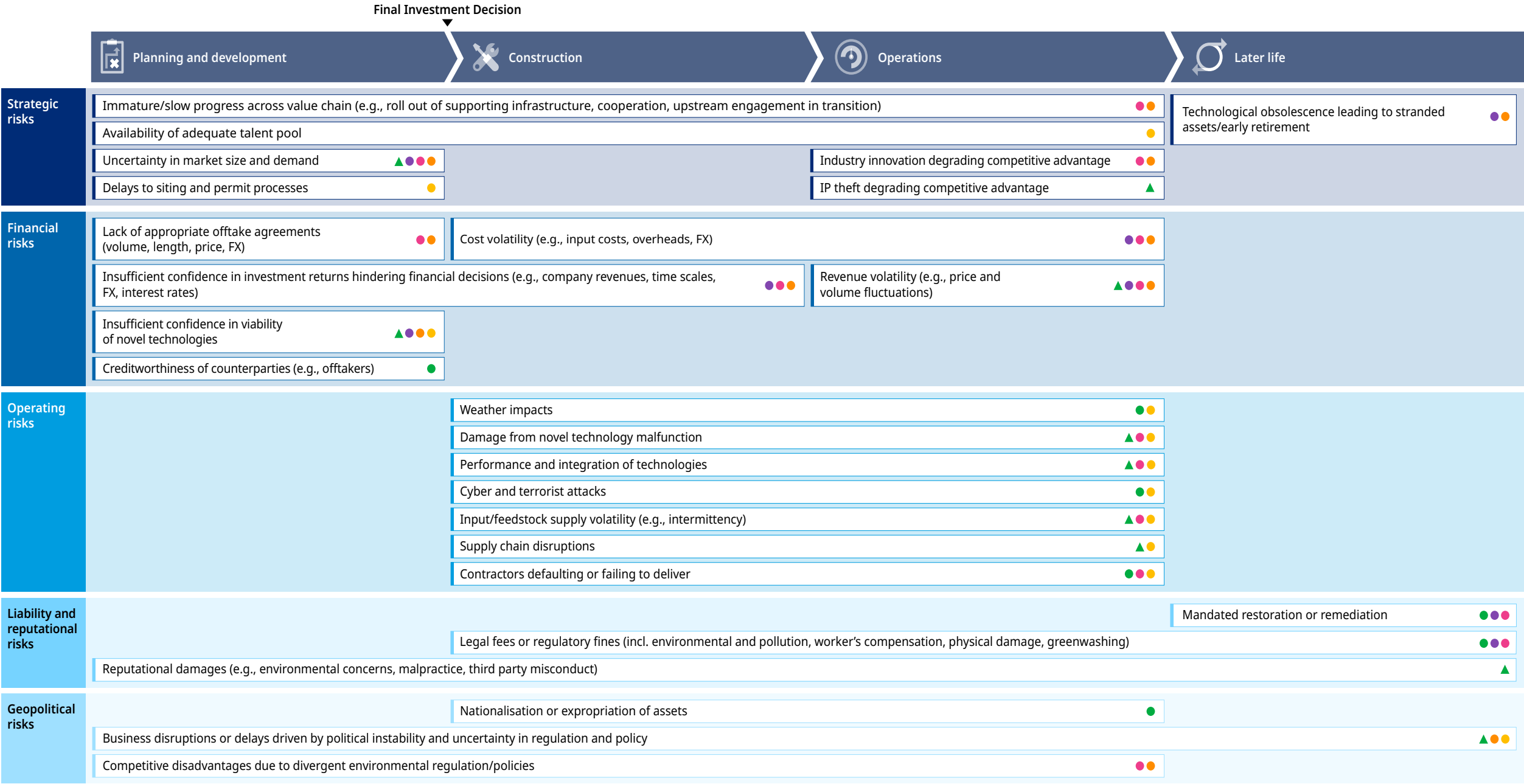
This document aims to be a comprehensive catalog of insurance solutions designed to assist risk managers and project teams in mitigating the risks that are frequently associated with transition-related projects.

It includes both conventional and innovative insurance options tailored to address specific risks that may affect the strategic, financial, operational, liability, or geopolitical aspects of a project. Each entry includes a concise description of the coverage, its applicability, and potential benefits, all of which have been vetted by subject matter experts from across Marsh's global specialties and industry sectors.

While this document aims to be thorough, it cannot cover every possible scenario. We encourage you to engage with your Marsh advisor to discuss the unique dimensions of your project and explore how risk management and insurance can support your business objectives.

Please note that the insurance solutions outlined in this document are applicable to a wide range of existing and first-of-a-kind technologies. In addition there are certain technology-specific insurances, such as for carbon capture and storage, that are not included in this catalog.

Risk landscape for the transition





Strategic risks

Strategic risks

i. Uncertainty of market size and demand

Conventional solutions	Description	Innovation	Description
Business Interruption insurance (part of Operational All Risk policy)	Cover for loss of revenue due to damage causing interruption of business operations.	Parametric cover for under demand or under supply	Cover for losses due to poor weather causing insufficient production or demand.
Comprehensive Credit Insurance	Non-cancellable cover for lenders against the failure of a borrower or counterparty to pay an amount due under an insured loan obligation.	Performance guarantee	Cover for losses due to underperformance of technology below a set criterion.
Trade Disruption insurance	Cover for additional expenses incurred to source new or alternative supply due to contract violation or loss of net profit due to contract violation.		
Delay In Start Up insurance (part of Construction All Risk policy)	Cover for loss of expected revenue of a delay in project completion resulting from insured physical damage.		

ii. Intellectual Property (IP) theft degrading competitive advantage

Conventional solutions	Description
Directors and Officers (D&O) Liability insurance	Cover for directors’ and officers’ costs in responding to a civil or regulatory action arising out of alleged IP infringement, or allegedly poor controls or governance allowing the theft to take place, as well as damages and civil fines, where insurable at law.
Intellectual Property (IP) Insurance	Cover for legal costs, enforcement, loss of revenue in the event of an IP dispute.
IP Infringement insurance	Cover for loss from the allegation of IP infringement or in connection with an actual infringement.
Trade Secret Value insurance	Cover for loss due to misappropriate/theft of trade secrets.
Edison IP Cover (Marsh)	Exclusive Marsh defence cover providing reputation and brand protection, emergency costs, fee loss and optional loss of future profit cover.



Financial risks

Financial risks

i. Creditworthiness of counterparties

Conventional solutions	Description	Innovation	Description
Comprehensive Credit insurance	Non-cancellable cover for lenders against the failure of a borrower or counterparty to pay an amount due under an insured loan obligation.	Non-traditional Credit insurance	Non-payment cover for start-ups or counterparties who do not satisfy usual credit requirements for credit market.
Contract Frustration insurance	Cover for losses from offtaker insolvency or protracted default or for non-repayment of contractual loan.	Oftaker Payment Risk insurance	Cover for losses from failure of offtakers* to pay contractually due amounts under a Power Purchase Agreement.
		Carbon Lender Non-Payment insurance	Covers lenders to carbon developers for losses from non-repayment of principal and potentially interest due to project failure or under performance.

*offtakers without the usually required credit rating.

ii. Revenue volatility (price and volume fluctuations)

Conventional solutions	Description	Innovation	Description
Political Risk insurance: Currency inconvertibility	Cover for financial losses caused by the failure of a foreign enterprise to exchange local currency into hard currency or to repatriate funds to an insured parent corporation.	Parametric cover for under demand or under supply	Cover for losses due to poor weather causing insufficient production or demand.
		Performance guarantee for energy efficiency	Cover for financial loss due to energy savings being less than expected (commonly applied to batteries).
		Technology performance guarantee	Cover for debt as a result of under performance of novel technology.
		Tax insurance	Cover for financial losses arising out of successful challenge of tax treatment by the tax authority.
		Renewable energy tax credit default insurance (US domiciled projects)	Covers sellers' losses in the event a buyer defaults on their commitment to purchase tax credits when generated or to pass credits on to the lender.
		Carbon lender non-payment insurance	Covers lenders to carbon project developers for losses from non-repayment of principal and potentially interest due to project failure or under performance.
		Carbon Delivery insurance	Cover for losses from non- or under-delivery of carbon credits on expected date.
		45Q tax credit insurance for carbon capture projects	Cover for loss of value of 45Q carbon sequestration tax credits.

iii. Insufficient confidence in viability of novel technologies

Conventional solutions	Description	Innovation	Description
Property Damage insurance	Cover for financial loss from damage to physical property.	Parametric cover for property damage	Cover for financial loss due to poor weather causing damage to physical property.
Directors and Officers (D&O) Liability insurance	Cover for directors' and officers' securities class actions arising out of share price falls.	Parametric cover for plant underperformance	Cover for financial loss due to poor weather causing plant underperformance — including cover for loss of production, loss of demand and operational disruption.
Comprehensive Credit insurance	Non-cancellable cover for lenders against the failure of a borrower or counterparty to pay an amount due under an insured loan obligation including loans for the funding or development of novel technologies.	Intellectual property (IP) insurance	Cover for losses due to devaluation of IP.
M&A Transactional Risks insurance (Warranty & Indemnity Insurance)	Covers purchaser's unknown and unforeseen financial loss arising from warranties and the tax indemnity within sale and purchase documentation.	Technology performance guarantee	Cover for losses from under performance of novel technology, allowing projects to continue to meet any financial obligations.
M&A Transactional Risk insurance (Contingent Risk Solutions)	Cover for known and contingent specific risks that could mature post-transaction.	Energy efficiency insurance for retrofits	Cover for losses due to annual shortfalls in energy savings caused by deficiencies in the design or implementation of energy saving measures in retrofitted assets.





Operating risks

Operating risks

i. Weather impacts

Conventional solutions	Description	Innovation	Description
Property Damage insurance	Cover for loss from damage to physical property.	Parametric cover for under or over demand, damage or disruption	Cover for losses due to poor weather or natural catastrophe events causing insufficient production, insufficient demand, physical property damage, and/or operational disruption.
Business Interruption/ Delay in Start Up (part of Construction all risk/Operational all risk policy)	Cover for loss of expected revenue due to a business interruption or delay in project completion resulting from insured physical damage.	Carbon Delivery insurance	Cover for losses from non- or under-delivery of carbon credits on expected date due to weather impacts.
		Carbon Cancellation insurance	Cover for losses as a result of carbon credit reversals caused by weather damage.





ii. Damage from novel technology malfunction

Conventional solutions	Description	Innovation	Description
Technology Error & Omission (E&O) insurance	Cover for losses due to errors, failure or underperformance of technology or services provided by technology.	Technology performance guarantee	Cover for losses from under performance of novel technology, allowing projects to continue to meet any financial obligations.
Product Liability insurance	Cover for damages, legal costs, and settlements incurred from cyber technology incidents which cause physical property damage, physical bodily injury, false arrest, defamation, or mental anguish.	Cyber Liability insurance for emerging risks	Cover for loss from emerging cyber risks resulting from integration of new technologies.
Cyber Liability insurance	Cover for loss from cyber risks (i.e., data breaches, cyber attacks).	Energy efficiency insurance for retrofits	Cover for losses due to: <ul style="list-style-type: none">• Accidental physical damage, including failure or breakdown of equipment installed as part of an energy saving retrofit project.• Loss of revenue and increased cost of working following insured damage to equipment.
Property Damage insurance	Cover for losses from damage to physical property.		
Equipment breakdown insurance (part of Construction All Risk/ Operational All Risk policy)	Cover for repair or replacement of new technology equipment in the event of a specified property damage event.		
IP insurance	Cover for legal costs, enforcement, loss of revenue in the event of an IP dispute.		

iii. Performance and integration of technologies

Conventional solutions	Description	Innovation	Description
Construction All Risk (CAR) insurance	All risks property damage and liability cover for losses to projects in construction and installation phases.	Parametric cover for under supply or under demand	Cover for losses due to poor weather causing insufficient production or demand.
Operational All Risk (OAR) insurance	All risks property damage and liability cover for losses to projects in construction and installation phases.	Technology performance guarantee	Cover for losses from under performance of novel technology, allowing projects to continue to meet any financial obligations.
Delay In Start Up insurance (part of Construction All Risk policy)	Cover for loss of expected revenue as a result of a delayed event during construction.	Energy efficiency insurance for retrofits	Cover for losses due to: Annual shortfalls in energy savings caused by deficiencies in the design or implementation of energy saving measures in retrofitted assets.
Business Interruption insurance (part of Operational All Risk policy)	Protects revenue if operations are interrupted due to specified property damage event.		
Geological Leakage trigger for CO2 Transport and Storage Projects	Cover for losses due to: <ul style="list-style-type: none">• Associated Emissions Trading Scheme costs• Associated costs of corrective measures• Also provides a non-damage leakage trigger for the associated Business Interruption Following any unexpected and unintended escape and/or release of CO2 from CCS facilities (including the geological storage complex).		
Extended warranty for electric vehicles (EVs)	Cover for repair costs from mechanical or electrical failures that do not arise from road accidents, including cover for performance degradation and capacity retention.		

iv. Cyber and terrorist attacks

Conventional solutions	Description	Innovation	Description
Property Damage insurance for Political Violence and Terrorism	Cover for property damage to investments and assets caused by political violence and terrorism.	Marsh and We2Sure Carbon Credit Fraud insurance	Cover for losses from theft or fraud of carbon credit certificates supported by Carbon Actuator technology.
Cyber Liability insurance	Cover for cyber risks from integration of new technologies (e.g., data breaches, cyber-attacks).	Marsh Enhanced Energy Cyber Cap	Specialized cover for energy sector businesses against risks related to cyber threats, including protection against losses following energy operation disruption and damages to critical infrastructure systems.
Crime insurance	Cover for direct financial loss from cyber fraud (i.e., deep fake social engineering, phishing, or hacking attacks).		

v. Input/feedstock supply volatility (e.g., intermittency)

Conventional solutions	Description	Innovation	Description
Cargo Stock Throughput insurance	Cross supply chain cover for physical loss of raw materials, other stocks, and finished products or commodities in transit or storage.	Parametric cover for under supply	Cover for losses due to poor weather causing insufficient production/ available feedstock.
Marine Trade Disruption insurance	Cross supply chain cover for loss of income and increased cost of working following delays and voyage frustration to raw materials, other stocks, and finished products or commodities in transit or storage.		

vi. Supply chain disruptions

Conventional solutions	Description
Delay in Start Up insurance (part of Construction All Risk policy)	Cover for loss of expected revenue caused by a delayed event.
Business Interruption insurance (part of Operational All Risk policy)	Protects revenue if operations are interrupted due to specified property damage event.
Comprehensive Credit insurance	Non-cancellable cover for lenders against the failure of a borrower or counterparty to pay an amount due under an insured loan obligation, including commercial risks such as default(s) due to insolvency or bankruptcy.
Trade Credit insurance	Cover for losses resulting from non-payment of short-term trade receivables due to protracted default, insolvency, or political risk events.
Cargo StockThroughput insurance	Cross supply chain cover for physical loss of raw materials, other stocks, and finished products or commodities in transit or storage.
Marine Trade Disruption insurance	Cross supply chain cover for loss of income / increased cost of working following delays and voyage frustration to raw materials, other stocks, and finished products or commodities in transit or storage.

vii. Contractors defaulting or failing to deliver

Conventional solutions	Description	Innovation	Description
Property Damage insurance	Cover for loss from damage to physical property.	Carbon Delivery insurance	Cover for losses from non- or under-delivery of carbon credits on expected date.
Contract Frustration insurance	Cover for losses from offtaker insolvency or protracted default or for non-repayment of contractual loan.		
Performance Bond issuance	Guarantee for compensation against contractor's insolvency or failure to perform.		
Bid Bond issuance	Guarantee submitted with the bid to ensure the validity of the bid upon contract award.		
Comprehensive Credit insurance	Non-cancellable cover for lenders against the failure of a borrower or counterparty to pay an amount due under an insured loan obligation including commercial risks such as loss of demand, and default(s) due to insolvency or bankruptcy.		
Supplier Default/ Pre-payment Trade Credit insurance	Cover for losses resulting from the non-delivery of pre-paid goods due to protracted default, insolvency, or political risk events.		



Liability and reputational risks

Liability and reputational risks

i. Mandated restoration or remediation

Conventional solutions	Description	Innovation	Description
Reclamation / Restoration bonds	Secures obligations under contracts where land is impacted, whereby the user must restore the land and/or rehabilitate the natural environment impacted by activities once the contract has concluded.	Ecological restoration insurance	EcoRestore product provided by SCOR for damage / deterioration of ecosystems to support the financing of ecological restoration projects.
Landfill guarantees	Cover for waste companies’ obligation to manage waste according to environmental agency agreements.		
Decommissioning bonds	Cover for collateral to be posted for decommissioning works required by government authority.		

ii. Legal fees or regulatory fines (incl. environmental and pollution, worker’s compensation, physical damage, greenwashing)

Conventional solutions	Description
License and permit environmental bonds	Guarantees for fees, fines, and costs of risks caused by loss of licenses, permits and incomplete and insufficient waste management.
Waste management bonds	
Directors and Officers liability	Cover for directors, officers, and senior management for personal defense costs, investigation costs, and (insurable) fines and damages, following allegations of breach of fiduciary duty, mismanagement, negligence, and regulatory investigations.
Environmental impairment liability (EIL) insurance	Cover for losses caused by incidents of pollution and other environmental impacts over the lifetime of a project, including legal defense costs, clean-up costs, natural resources damage, third-party bodily injury/property damage claims, and related loss of income.
Carbon Capture and Storage extension to EIL	Addition of carbon dioxide as a covered pollutant under conventional EIL insurance. Cover can also be used to evidence financial assurance required under US environmental permitting regulations.
Legal Indemnity insurance	Cover offering protection against known title defects identified during property due diligence process, as well as those which cannot be identified. Also where title warranty is limited or not provided.



iii. Reputational damages

Conventional solutions	Description	Innovation	Description
Judicial litigation bonds for environmental issues	Guarantee to cover costs of disputes relating to execution of construction works.	Parametric cover for reputational damage	Cover for losses resulting from deterioration of reputation based on agreed index (e.g. market stock price).
Crisis Management cover	Cover for losses as a result of damage to company reputation (e.g., payment for resulting PR and other associated costs).		
Technology Error and Omissions (E&O) insurance	Cover for losses due to errors, failure or underperformance of technology or services.		
Product Liability insurance	Cover for damages, legal costs, and settlements incurred from defective or underperforming products resulting in damage to company reputation.		





Geopolitical risks

Geopolitical risks

i. Nationalization or expropriation of assets

Conventional solutions	Description	Innovation	Description
Expropriation insurance	Cover for losses incurred due to host government interference with fundamental ownership rights of asset (e.g., confiscation, nationalization).	Carbon cancellation insurance	Cover for losses as a result of carbon credit invalidation or reversal caused by nationalization or expropriation of land-based assets.
Forced abandonment insurance	Cover for losses where abandonment of foreign enterprise is required as a result of extended political violence in the host country or relevant region of that country.	Carbon Delivery insurance	Cover for losses from non- or under-delivery of carbon credits on expected date due to nationalization or expropriation of land-based assets.
Forced divestiture insurance	Cover for losses incurred due to requirement by own government to permanently divest all or part of shareholdings in foreign enterprise.		

ii. Business disruptions or delays driven by political instability and uncertainty in regulation and policy

Conventional solutions	Description	Innovation	Description
Political Violence and Terrorism insurance	Cover for loss of revenue due to political violence and disturbances interrupting business operations.	Carbon cancellation insurance	Cover for losses as a result of carbon credit reversal caused by political disturbances or invalidation due to policy or methodology changes.
		Carbon Delivery Insurance	Cover for losses from non- or under-delivery of carbon credits on expected date caused by political disturbances.





Our expertise

In the rapidly evolving landscape of the energy transition, a comprehensive approach to risk management is crucial for organizations aiming to stay ahead.

At Marsh, our global insurance expertise across a variety of specialties and sectors positions us to partner with your company to minimize risk exposures and navigate unique challenges associated with energy transition projects. We can ensure your energy transition projects are not only successful but also resilient against the uncertainties of the future.

For further information, please contact our insurance specialists at a local Marsh office or visit our website at marsh.com.



About Marsh

Marsh, a business of Marsh McLennan (NYSE: MMC), is the world's top insurance broker and risk advisor. Marsh McLennan is a global leader in risk, strategy and people, advising clients in 130 countries across four businesses: Marsh, Guy Carpenter, Mercer and Oliver Wyman. With annual revenue of over \$24 billion and more than 90,000 colleagues, Marsh McLennan helps build the confidence to thrive through the power of perspective. For more information, visit marshmclennan.com, follow us on LinkedIn and X.