

Emerging Risks

Market Context	<ul style="list-style-type: none"> Environmental risks – climate change and sustainability scrutiny, (e.g. emissions, transparency). Volatility of both supply and demand of electricity. Volatility in commodity prices. Legal, (e.g. tax law changes, carbon levy, energy tariff caps, regulatory control, data protection). Waste management, including radioactive waste. Legal and financial ramifications of accidents. Disruptive new technology and digital transition. Pandemic impact.
----------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Value Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">People</td> <td> <ul style="list-style-type: none"> Brexit labour planning. Post pandemic workforce planning. Risk of industrial action and trade union activity. Employees being at forefront of climate/world issues. Population growth. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Relationships</td> <td> <ul style="list-style-type: none"> Dynamic business continuity planning across supply chain. Relationship with Government/Regulatory bodies. Maintaining long-term collaborative UK-EU relationships on energy issues. Evolving customer behaviour, needs and demands. Investor/shareholder support for sustainability strategy. Forward thinking partnerships for Industry 4.0. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Brand</td> <td> <ul style="list-style-type: none"> Big brand challenges – challenger brands. Digital/automation opportunities and challenges. Rapid brand destruction via social media. Media attention and lobbying from pressure groups. Reputational damage from failure to be fair and transparent. </td> </tr> </table>	People	<ul style="list-style-type: none"> Brexit labour planning. Post pandemic workforce planning. Risk of industrial action and trade union activity. Employees being at forefront of climate/world issues. Population growth. 	Relationships	<ul style="list-style-type: none"> Dynamic business continuity planning across supply chain. Relationship with Government/Regulatory bodies. Maintaining long-term collaborative UK-EU relationships on energy issues. Evolving customer behaviour, needs and demands. Investor/shareholder support for sustainability strategy. Forward thinking partnerships for Industry 4.0. 	Brand	<ul style="list-style-type: none"> Big brand challenges – challenger brands. Digital/automation opportunities and challenges. Rapid brand destruction via social media. Media attention and lobbying from pressure groups. Reputational damage from failure to be fair and transparent.
People	<ul style="list-style-type: none"> Brexit labour planning. Post pandemic workforce planning. Risk of industrial action and trade union activity. Employees being at forefront of climate/world issues. Population growth. 						
Relationships	<ul style="list-style-type: none"> Dynamic business continuity planning across supply chain. Relationship with Government/Regulatory bodies. Maintaining long-term collaborative UK-EU relationships on energy issues. Evolving customer behaviour, needs and demands. Investor/shareholder support for sustainability strategy. Forward thinking partnerships for Industry 4.0. 						
Brand	<ul style="list-style-type: none"> Big brand challenges – challenger brands. Digital/automation opportunities and challenges. Rapid brand destruction via social media. Media attention and lobbying from pressure groups. Reputational damage from failure to be fair and transparent. 						

Growth Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">New Markets</td> <td> <ul style="list-style-type: none"> Dynamic customer preferences. Authorisations, permits, licences, and partnerships to set up new plants. Growth via international expansion costly. Regulatory compliance. Cultural fit. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">New Services</td> <td> <ul style="list-style-type: none"> Environmental demand for new renewable services. Culture of innovation. Government regulation. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Acquisition</td> <td> <ul style="list-style-type: none"> Loss of key employees, customers, or suppliers. Increasing debt to finance acquisition. Efficiency and savings overestimation. M&A consolidation. </td> </tr> </table>	New Markets	<ul style="list-style-type: none"> Dynamic customer preferences. Authorisations, permits, licences, and partnerships to set up new plants. Growth via international expansion costly. Regulatory compliance. Cultural fit. 	New Services	<ul style="list-style-type: none"> Environmental demand for new renewable services. Culture of innovation. Government regulation. 	Acquisition	<ul style="list-style-type: none"> Loss of key employees, customers, or suppliers. Increasing debt to finance acquisition. Efficiency and savings overestimation. M&A consolidation.
New Markets	<ul style="list-style-type: none"> Dynamic customer preferences. Authorisations, permits, licences, and partnerships to set up new plants. Growth via international expansion costly. Regulatory compliance. Cultural fit. 						
New Services	<ul style="list-style-type: none"> Environmental demand for new renewable services. Culture of innovation. Government regulation. 						
Acquisition	<ul style="list-style-type: none"> Loss of key employees, customers, or suppliers. Increasing debt to finance acquisition. Efficiency and savings overestimation. M&A consolidation. 						

Operational Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Finance</td> <td> <ul style="list-style-type: none"> Energy price volatility (inflation, control/caps, subsidies, forex). Carbon levy risks. Rising or unknown costs around building, maintaining, or decommissioning infrastructure, e.g. reservoirs, dams, nuclear power stations, oil rigs, wind/solar farms, mines. Regulatory fines and penalties. Claims reserve liabilities. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Operating Model</td> <td> <ul style="list-style-type: none"> Changing and complex supply chains/business models. Legal and strategic frameworks. Operation dependent on administrative permits. Business continuity. Data security and breach resilience. </td> </tr> </table>	Finance	<ul style="list-style-type: none"> Energy price volatility (inflation, control/caps, subsidies, forex). Carbon levy risks. Rising or unknown costs around building, maintaining, or decommissioning infrastructure, e.g. reservoirs, dams, nuclear power stations, oil rigs, wind/solar farms, mines. Regulatory fines and penalties. Claims reserve liabilities. 	Operating Model	<ul style="list-style-type: none"> Changing and complex supply chains/business models. Legal and strategic frameworks. Operation dependent on administrative permits. Business continuity. Data security and breach resilience.
Finance	<ul style="list-style-type: none"> Energy price volatility (inflation, control/caps, subsidies, forex). Carbon levy risks. Rising or unknown costs around building, maintaining, or decommissioning infrastructure, e.g. reservoirs, dams, nuclear power stations, oil rigs, wind/solar farms, mines. Regulatory fines and penalties. Claims reserve liabilities. 				
Operating Model	<ul style="list-style-type: none"> Changing and complex supply chains/business models. Legal and strategic frameworks. Operation dependent on administrative permits. Business continuity. Data security and breach resilience. 				

Marsh Industry Practices Meet the Team



Carl Ratcliffe
Power, Energy and Mining Practice Leader

“The power, mining, utility, and waste industries provide resources that we cannot live without. They are not without their challenges and we are proud to work with a number of companies operating in these sectors. I am proud of the capabilities we have to bring innovative solutions to clients.”

This is a marketing communication.

The information contained herein is based on sources we believe reliable and should be understood to be general risk management and insurance information only. The information is not intended to be taken as advice with respect to any individual situation and cannot be relied upon as such.

Marsh Ltd is authorised and regulated by the Financial Conduct Authority for General Insurance Distribution and Credit Broking (Firm Reference No. 307511).

Copyright © 2020 Marsh Ltd All rights reserved 282123



Chartered

Compliance No. MC200221796



Power and Utilities

Including Mining and Waste



Industry Risks

Market Context	<ul style="list-style-type: none"> Macroeconomics (gross domestic product, inflation, deflation, unemployment rate, interest rate, etc). Geopolitical risks, (e.g. Brexit, political unrest, trade sanctions, policy changes). Skilled/unskilled labour shortage, (e.g. engineers/renewables experts). Competitor landscape changing, (e.g. low barriers to entry for small to medium enterprises). Changing consumer preferences to sustainable sources and dynamic digital access. Decarbonisation.
----------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Value Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">People</td> <td> <ul style="list-style-type: none"> Health and safety and wellbeing – employees. Attracting, training, developing and retaining talent. (Re)Train to meet Industry 4.0 needs. Employee benefits and rewards. Equality, inclusion and diversity policies. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Relationships</td> <td> <ul style="list-style-type: none"> Supply chain ethics and relationship management. Relationships across the logistics value chain. Customer relationship management. Local community engagement. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Brand</td> <td> <ul style="list-style-type: none"> Brand sentiment. Company reputation, (e.g. effective crisis management after black outs/water shortages, industrial accidents). Exposure and reputation vulnerability on social media. </td> </tr> </table>	People	<ul style="list-style-type: none"> Health and safety and wellbeing – employees. Attracting, training, developing and retaining talent. (Re)Train to meet Industry 4.0 needs. Employee benefits and rewards. Equality, inclusion and diversity policies. 	Relationships	<ul style="list-style-type: none"> Supply chain ethics and relationship management. Relationships across the logistics value chain. Customer relationship management. Local community engagement. 	Brand	<ul style="list-style-type: none"> Brand sentiment. Company reputation, (e.g. effective crisis management after black outs/water shortages, industrial accidents). Exposure and reputation vulnerability on social media.
People	<ul style="list-style-type: none"> Health and safety and wellbeing – employees. Attracting, training, developing and retaining talent. (Re)Train to meet Industry 4.0 needs. Employee benefits and rewards. Equality, inclusion and diversity policies. 						
Relationships	<ul style="list-style-type: none"> Supply chain ethics and relationship management. Relationships across the logistics value chain. Customer relationship management. Local community engagement. 						
Brand	<ul style="list-style-type: none"> Brand sentiment. Company reputation, (e.g. effective crisis management after black outs/water shortages, industrial accidents). Exposure and reputation vulnerability on social media. 						

Growth Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">New Markets</td> <td> <ul style="list-style-type: none"> Demand/client led growth. Customer acquisition. New or expanded operations. Geographic expansion. Cross category investments. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">New Services</td> <td> <ul style="list-style-type: none"> Consumer preferences. Competition and cost. New product development, (e.g. battery storage). Processing, storage, and distribution. Pricing and product promotion. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Acquisition</td> <td> <ul style="list-style-type: none"> Accurate valuation. Capital structure of combined entity. Cultural integration. Transparency on legacy risks. Event driven risks (mergers & acquisitions, hostile takeover). </td> </tr> </table>	New Markets	<ul style="list-style-type: none"> Demand/client led growth. Customer acquisition. New or expanded operations. Geographic expansion. Cross category investments. 	New Services	<ul style="list-style-type: none"> Consumer preferences. Competition and cost. New product development, (e.g. battery storage). Processing, storage, and distribution. Pricing and product promotion. 	Acquisition	<ul style="list-style-type: none"> Accurate valuation. Capital structure of combined entity. Cultural integration. Transparency on legacy risks. Event driven risks (mergers & acquisitions, hostile takeover).
New Markets	<ul style="list-style-type: none"> Demand/client led growth. Customer acquisition. New or expanded operations. Geographic expansion. Cross category investments. 						
New Services	<ul style="list-style-type: none"> Consumer preferences. Competition and cost. New product development, (e.g. battery storage). Processing, storage, and distribution. Pricing and product promotion. 						
Acquisition	<ul style="list-style-type: none"> Accurate valuation. Capital structure of combined entity. Cultural integration. Transparency on legacy risks. Event driven risks (mergers & acquisitions, hostile takeover). 						

Operational Drivers	<table border="1"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Finance</td> <td> <ul style="list-style-type: none"> Productivity and capacity. Governance framework. Sustainability impact. Adoption latest technology, (e.g. drones, 3D printing, artificial intelligence (AI), battery storage). Cyber security and data protection. </td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Operating Model</td> <td> <ul style="list-style-type: none"> AI, data governance, and control. Business transformation. Operational resilience failure. Execution, delivery, and process management. Internal/external fraud. </td> </tr> </table>	Finance	<ul style="list-style-type: none"> Productivity and capacity. Governance framework. Sustainability impact. Adoption latest technology, (e.g. drones, 3D printing, artificial intelligence (AI), battery storage). Cyber security and data protection. 	Operating Model	<ul style="list-style-type: none"> AI, data governance, and control. Business transformation. Operational resilience failure. Execution, delivery, and process management. Internal/external fraud.
Finance	<ul style="list-style-type: none"> Productivity and capacity. Governance framework. Sustainability impact. Adoption latest technology, (e.g. drones, 3D printing, artificial intelligence (AI), battery storage). Cyber security and data protection. 				
Operating Model	<ul style="list-style-type: none"> AI, data governance, and control. Business transformation. Operational resilience failure. Execution, delivery, and process management. Internal/external fraud. 				



Supply Chain Risks

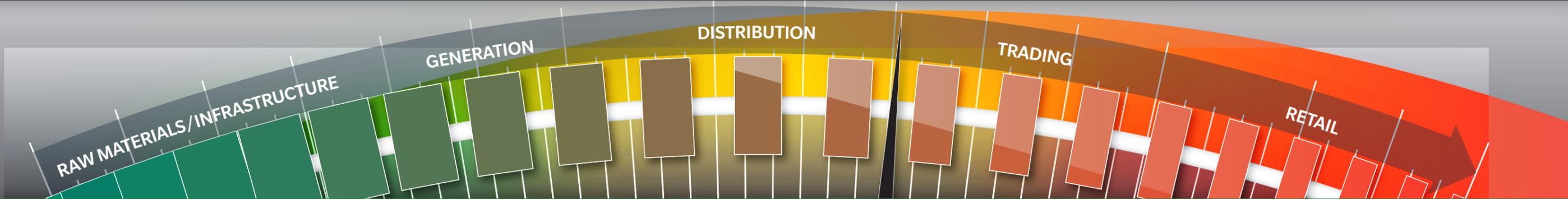
- Material shortages.
- Efficient renewable energy sources.
- Risks around building, maintaining, or decommissioning infrastructure, (e.g. reservoirs, dams, power stations, oil rigs, wind/solar farms).

- Adverse plant event, (e.g. fire, flood, accident, sabotage, loss of capacity).
- Weather dependency for renewable energy (e.g. wind, solar, rainfall).
- Storage and transportation.
- Excess capacity risk from energy storage technology, (e.g. battery developments, water/tidal storage).

- Distribution strategy (global/national/local).
- Storage and transportation risks (e.g. losses from gas pipeline, damaged cables, overloaded, ageing National Grid).
- Third-party contractors.
- Increased use of technology.

- Ofgem/Ofwat regulations and pricing controls.
- Manipulation risks (over-the-counter trading).
- Market environment.
- Conduct and ethics.

- Changing consumer needs and increased choice.
- Digital automation, switching provider easier.
- Increased competition and non-competitive pricing.
- Business planning and flexibility.



Case Studies

Background

We were approached by a client based in a foreign territory to provide insurance for a wind project with five separate power purchase agreements. The client also had other solar and wind assets based in locations with high natural catastrophe exposures, which had been subject to large claims, and were therefore facing significantly increased premiums and restricted coverage.

Solution

We leveraged our international expertise and local market knowledge and languages to design an insurance programme which was appropriate for the assets, alongside meeting local regulatory requirements, and levels of protection required to satisfy all individual stakeholders.

Impact

Our client gained premium savings across all their assets, despite the loss record.

Background

Our client suffered major fire damage due to a severed oil line caused by a gas turbine error which damaged the entire hot gas path section, exhaust diffuser, compressor section, generator, and rotor. Their underwriters argued that substations were not covered and the settlement subsequently offered was significantly lower than sought.

Solution

Working closely with our client and the underwriter, we managed to secure a further USD5 million in relation to the under-insurance element of the over speed claim and acceptance that substations were covered.

Impact

This resulted in our client receiving 100% of their claim.

Background

Our client's project was a new biomass-fuelled combined heat and power facility in the UK, backed by European project financiers. Traditionally, delay in start-up (DSU) insurance cover, which is commonly taken out in large-scale construction projects, only provides indemnification for actual lost revenue during the indemnity period (the insured period of delay).

Solution

We developed a novel insurance solution in the market for construction DSU insurance.

Impact

Our solution breaks new ground by supplementing the traditional project insurances (construction all risks (CAR) and DSU) to protect the developer and funders against the risk of the project losing an entire future revenue stream. This was dependent on the project securing the benefit of the UK Government's Renewable Obligation Certificates (ROC) scheme by the statutory "cliff-edge" deadline for its closure.

Background

Our client wished to undertake an assessment of their property damage and business interruption risk exposure to ensure their programme was fit for purpose and they had an assurance that the limits were appropriate to cover any potential loss the business could suffer.

Solution

We introduced a programme to assess loss scenarios across a range of distribution assets which helped identify and evaluate the exposures our client faced.

Impact

Our output helped inform and facilitate an effective insurance marketing exercise and our client benefitted from over GBP750,000 of savings plus enhancements in policy cover to ensure adequacy of cover in the future.

Background

Our client had identified 1,300 cyber risks across their business. They had considered an insurance solution previously but wanted to fully understand how their existing cover would respond first.

Solution

Working closely with our client, a process of identifying loss scenario developments and quantification of those losses was undertaken. All policies were stress tested in order to identify coverage weaknesses and enhancements required in the future.

Impact

Cost was driven down and a placement with two towers of USD200 million of cover was placed in the market.

Between 1990 and 2018 the power sector has reduced emissions by 68%, representing 60% of the overall economy wide reduction in CO2.



Source: Energy in the UK in 2019, Energy UK - data

53% of all power generated in 2018 comes from low carbon sources.



Source: Energy in the UK in 2019, Energy UK

The power sector contributed GBP33.5 billion in economic value created in 2018, up GBP1.9 billion on 2017.



Source: Energy in the UK in 2019, Energy UK

The UK generated 222.9 million tonnes of total waste in 2016. "Recycling and other recovery" was the most common final waste treatment type in the UK, with landfill the second most used waste treatment.



Source: DEFRA Statistics on Waste 2019

There are some 7,600 companies involved in UK mining and quarrying and the industry has turnover in excess of GBP28.6 billion.



Source: ONS Business Population Estimates 2018