



Taking Cover: How An
Insurance Shortfall Leaves
The Energy Sector Exposed

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Today's energy companies face higher risks than ever, and many of today's insurers have more capacity than ever and a hunger for new business. So why do so many energy companies still find it hard to get the cover they need in key areas of their operations? This article examines the risk challenges faced by energy companies, and suggests some ways forward to help deliver the protection they need.

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Energy companies today face increased and increasingly complex risks, be it from the crash in oil prices that has disrupted business models, the move toward drilling in more remote and environmentally sensitive areas, or attacks from cyber criminals. With budgets under pressure as a result of the collapse in oil prices, companies are also likely to be addressing the risk management challenge with fewer resources. How should they respond? And is the insurance industry doing enough to assist them? Our experience suggests that in some key areas where energy companies are exposed, the insurance products on offer fail to provide the protection they need.

Five features of the energy industry's current situation will dominate its approach to managing risk.

First, ***business models need to be adapted to changing conditions***, largely because of the collapse in oil prices. Companies worldwide are reducing costs wherever they can by, for example, reviewing their strategies, slashing capital expenditure, and mothballing stranded assets in order to protect future earnings. Mergers and acquisitions are also taking place with the aim of developing synergies and cost savings. Transferring risk against this backdrop needs to be done in the most efficient way possible, not least because risk management budgets are also under pressure.

Second, ***the industry increasingly operates in a globalised environment***. The past ten years have seen companies expand from their regional comfort zones into unfamiliar areas of the world with unfamiliar regulatory regimes. This expanded global footprint requires companies to understand an ever-growing list of responsibilities under contract. And it also carries heightened supply chain risk.

The Japanese earthquake of 2011, for example, showed the damage that disruption to the supply chain can inflict. And it is not just physical loss or damage at the supplier's site that causes disruption. Supplier insolvency, power outages, political unrest, IT failures, labor disputes, transportation problems, pandemics – all pose risk in a world where companies are searching the globe for lower-cost supplies and operating “just-in-time” procurement strategies to keep inventory costs low and stocks at minimum levels.

The third feature of the risk landscape is *the need to manage human capital*. The oil price collapse has led to the loss of thousands of jobs in the industry. But if a company loses its most experienced workers – and they might be among the first to go because they are closer to retirement or the most expensive – it can be left short of the skills and knowledge needed to sustain current business and then build it when the economic cycle turns. Retention of talent as profits fall, or at least measures to ensure that accumulated knowledge is passed down to younger employees, is thus a priority.

Mindful that the legal and regulatory duty of care bar has risen in recent years, companies must also ensure that their employees operate in as safe an environment as possible. Political unrest, the remoteness of locations, infectious diseases, and workplace accidents are among the risks they need to counter. The loss of life when terrorists occupied the Ardenas gas facility in Algeria in 2013 is a reminder of how hard this can be.

Fourth up is *climate change and care of the environment*, particularly at a time when energy companies are venturing into environmentally sensitive areas such as the Arctic in search of resources. Failure to comply with legal and regulatory environmental requirements for clean energy and lower hydrocarbon emissions can hit a company's

balance sheet, share price, and reputation hard, as witnessed by car manufacturer Volkswagen's emissions scandal. Sales of its cars in the United Kingdom alone have fallen by 20 percent as a result. The consequences of an environmental catastrophe are seemingly limitless. To date, the cost to BP of the Deepwater Horizon blowout and explosion stands at more than \$50 billion, enough to ruin oil companies not in the super-major league.

The fifth feature is the *impact of new technology*. Access to big data from the internet along with advanced analytics helps companies make better decisions. And the internet of things, which embeds electronics, software, sensors, and network connectivity within all manner of machines and infrastructure, can improve operational efficiency while lowering costs.

But the internet brings with it risks. Indeed, the risk of a major incident caused by a cyber attack constantly increases. Globally, it is estimated that cyber attacks against oil and gas infrastructure will cost companies \$1.9 billion by 2018.¹ With industrial control systems used by the energy industry now routinely connected to the internet, it is possible to visualize a cyber attack causing an energy disaster on the scale of Piper Alpha, Phillips Pasadena, Exxon Valdez or Deepwater Horizon.

Further risks arise from the development of new technology within the industry. Fracking for shale oil and gas, for example, raises the environmental legal liability risk because the process requires a continual supply of water to be injected into wells. And the more sophisticated the technology in the control rooms that operate the drilling, the more potential is created for technology failure.

¹ ICS-CERT

How energy companies can respond



The five main challenges facing energy companies and some of the risk management requirements that ensue are highlighted in Exhibit 1 (above).

Perhaps most noteworthy is how few items on the list relate to insurance products. Insurance remains a vital tool for risk managers and a host of insurance products are available, from Property Damage to Control of Well and Liabilities, Product Recall, and Executive Risk. But insurance products alone have never been the entire solution to managing risk and on reduced budgets purchasing yet more cover might not be feasible.

So perhaps the focus should be first on risk mitigation. Professional contractual and engineering risk reviews are two of the most important tools available to energy industry risk managers, particularly when companies remain prone to expanding their operations into unfamiliar domains, unaware of the enhanced risks to which they become exposed.

In addition, at a time when energy companies need to make operational savings, it is vital that they decide when it makes sense to retain risk and when to transfer it – a decision that increasingly powerful modelling and analytic tools can help them make. But how can the insurance market help?

Areas for improvement

We believe energy companies are under-served in four key areas: supply chain risk, cyber risk, Gulf of Mexico windstorm risk and drilling risk.

Supply chain risk

The Japanese earthquake highlighted how poorly protected companies are when a natural catastrophe disrupts supply chains, and the situation is little improved. Today, disruption to the supply chain of an energy company operating in Asia could conceivably cost in the region of USD1 billion. However, it is unlikely that more than USD150 million is available in the insurance markets for this peril at a commercially viable price.

The disconnection between supply and demand is explained by a shortage of information: general downstream insurers, who would ideally offer this type of exposure, are reluctant to offer more than basic cover without extensive detail concerning what might be thousands of links in a supply chain. A fledgling stand-alone supply chain insurance market is now offering wider cover, but this is relatively expensive and requires similarly detailed information.

Risk managers are thus on the horns of a dilemma. They are particularly concerned about this type of risk since the Japanese earthquake, and their managements expect them to do everything possible to mitigate it. But they lack the appetite to spend two years or more assessing their supply chains in the way the insurance market demands as they do not have the resources to do so.

Brokers and other risk intermediaries are beginning to bridge this gap by helping companies determine whether or not they have a serious problem in their supply chain, and by developing Business Continuity plans that recommend risk mitigation measures to reduce an energy company's supply chain risk, be it by revising storage strategies or using a wider range of suppliers, for instance. To date, though, there seems little prospect of the insurance market delivering a truly effective risk management solution.

Cyber risk

Despite a high level of cyber risk, neither the upstream nor downstream energy insurance markets provide cover. For the past ten years, almost all policies issued by these markets have contained a cyber exclusion, reflecting underwriters' inability to assess and quantify cyber risk given their lack of expertise in the area. Instead they leave

it to cyber specialists who offer standalone cyber products, but generally only with limited cover as the market remains small. Hence, despite some recent developments in the London market to improve matters, the vast majority of energy companies remain inadequately protected.

Gulf of Mexico windstorm risk

Hurricane Ike gained notoriety in 2008 as the third most expensive event in insurance history. Since then, energy companies operating in the Gulf of Mexico have struggled to buy protection for the hurricane season, even though climate change threatens to increase the risk of severe weather events. That is because losses caused by Ike, particularly those suffered by upstream operators, far exceeded insurers' estimates and there followed an immediate concentration of capacity, a massive increase in rates, and a virtual tripling of insurance retentions. Capacity for this type of exposure in the market is thought to be about \$750 million, compared to a potential overall windstorm exposure of more than \$20 billion.

Yet despite the limited coverage and the hike in rates, most energy companies have no choice but to buy whatever cover is available. That leaves the insurance market in a seemingly enviable situation, certain there will be sufficient demand no matter how expensive and restricted the product might be.

Drilling risk

The standard methodology for assessing drilling risk – essentially the risk of a blowout – has not changed in almost 30 years since it was first used for drilling in the Gulf of Mexico. It gives a rate for each foot drilled on the presumption that the deeper you drill, the greater the risks and the more expensive any remedial action. But the methodology does not take account the very different conditions that exist today in different drilling environments – in shale gas fields or the Arctic, for example. Drilling in the Arctic ice shelf is quite shallow, but the remoteness of the location brings its own challenges when responding to problems.

The alternative methodology – a simple rate based on the value of the well – is inadequate too, as some wells will be expensive for different reasons. Current rating models are therefore good in parts, but the energy industry really needs an entirely fresh product if it is to accurately assess the drilling risks different energy companies face in different environments, and charge premiums accordingly.

Future developments

For energy companies to have any realistic prospect of being able to transfer risk in the four areas to the extent they would like, three imperatives will need to be addressed.

Make better use of data. Big data and powerful analytics can help insurers better understand and assess the risks each energy company faces. Algorithms now exist, for example, that help insurers assess the likelihood and severity of an oil spill more accurately, as well as the clean-up costs. Better use of big data will surely facilitate the wider, fuller provision of cover against cyber attack and supply chain disruptions.

Collaborate more. Energy companies are spending considerable resources assessing their vulnerability to cyber attack. But they are reluctant to share their knowledge, or to admit to any vulnerability or indeed that they have been subject to an attack unless they have to. And few are willing to share their risk mitigation plans for fear of helping would-be attackers. Yet greater sharing of information with their insurers could help them get the cover they need. The same goes for drilling risk. It is surely not wishful thinking to imagine that energy companies could work more closely with insurers to help them better assess the particular drilling risks each faces.

But insurers need to collaborate among themselves too. Again, take cyber risk. Rather than working in siloes, underwriters of energy, cyber, and political violence could conceivably pool their industry knowledge, expertise, and market clout to develop an integrated product that helps clients cover the mounting risks they face from a cyber attack.

Innovate to compete. There is an irony in current market dynamics: insurers might be reluctant to offer much needed cover in energy companies' key areas of risk, but at the same time, their premium base is under attack and prices are falling as a result. Hence they are hungry for

more business. This competitive dynamic will, we believe, be the most important catalyst for change, prompting insurers to develop innovative, keenly-priced products that make better use of data and collaboration.

Pressure on prices comes from several directions. Reduced risk management budgets are one factor. Recently, a major integrated oil company based in North America elected to cut its insurance program by half. Other companies are also deciding to retain more of their own risk as actuarial analyses point to risk retention as a way of lowering the overall cost of risk.

Meanwhile, supply continues to expand. Insurers are awash with capital owing to a relatively benign claims environment in the past three or four years and higher capitalization requirements. Also, with interest rates and risk-free returns so low in alternative assets, there is growing investor interest in the insurance sector. Capacity for upstream energy insurance has almost doubled in five years, from just under \$4 billion in 2010 to more than \$7 billion in 2015.

Oversupply is starting to affect both the reinsurance and primary markets. But it is clear that competing on price alone will not provide a long-term solution to the market's predicament. Rather, insurers need to build stronger, more highly valued relationships with their clients. In some instances – such as windstorm cover – that might mean lowering premiums where they cannot be justified for what has become a captive audience. But often it will mean finding innovative ways to ensure energy companies get the cover they need, adding value to their clients' operations and generating premium income for themselves as a result. Looked at another way, insurers' failure to provide cover in today's super-competitive market exposes not only energy companies' business to risk, but their own business too.

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