



Still struggling for profitability? A Power underwriter's view of the market

As the loss record for Power risks continues to deteriorate, we asked Rokstone's Ian Green (IG) to speak to us about some of the key drivers that he is seeing in the Power market in the second half of 2023. Ian is Head of Power at Rokstone and is one of the most experienced Power underwriters currently operating in the London market. Asking the questions were Declan Cleary, Broker, Power and Utilities, Natural Resources, WTW London (DC) and Carlos Wilkinson, GB Head of Power & Utilities, Natural Resources, WTW London (CW). The following is an edited transcript of their conversation.

DC: Ian, In general terms, how profitable do you think the Power portfolio now is across the global insurance markets? Have the premium increases imposed over the last few years enabled insurers to attain technical rating adequacy?

IG: Given where we are in the underwriting cycle, a stage which is supposed to be near the top of a market which only recently ended a decade and a half of sliding rate and/or terms, I think profitability has barely been restored. Perhaps it's more apparent in London where smaller more specialist units, particularly Lloyd's syndicates, tend to be assessed more on annual results in a sector that experiences both attrition and severity? I'm not sure other markets see such a wide spread of worldwide risk. Furthermore, local markets write this class into general Property portfolios and do not necessarily have the quantity of risk to be able to spot individual issues or generate sufficient statistics to be able to accurately price and/or term individual risk. It can be a major challenge for technical underwriters writing a portfolio in this class.

DC: So in the London market, can this be seen in the different attitudes between Lloyd's and the company markets?

IG: Smaller company insurers, operating with technical expertise, are exposed to the same issue as Lloyd's syndicates; more focus on annual results and more difficult to spread results across portfolios and time. I would also argue that this is most apparent in the purchase of reinsurance treaty where multi-nationals have significant economies of scale. It is easier in small operations where the whole chain of decision making and authority is shorter and closer "to the sharp end" to see market dynamics and feel results closer to real time.

CW: In terms of those London players who you believe know their books in detail, what do you think their mood is like at the moment?

IG: I would say there is undoubtedly concern at the levels of pricing/terms, particularly because recently the sector has seen a number of additional challenges, some brand new and some returning to prominence. Not necessarily in any order, I would include:

Physical Damage (PD) deductibles: these have not moved with inflation and in many instances a “typical” deductible for a specific item of equipment is largely unchanged in two decades. For example, a “typical” US\$ 1m deductible on an F class turbine was the same \$1m in the early 2000’s. You don’t need me to explain that rates would need to be increased maintain a level return.

Business Interruption (BI) deductibles: these are almost always set as a number of days, so the same dynamic doesn’t apply here. However, there has been huge volatility in certain power markets/grids leading to large increases in sums insured and resulting in a number of disproportionately large claims. The challenge is to keep in tune with the rapid change in dynamics in many different markets using rating models that are not evolved to properly deal with these.

Valuation of assets: this is a constant issue but is certainly a “hot” one at the moment. Perhaps because it has been somewhat neglected in the past few years with more pressing challenges but also because inflation of labour and material has taken off. Insurers are seeing this in many, but not all claims. Most large and or complex equipment is homogeneously priced independent of its operating territory, although this is not always the case with some materials and particularly labour, where there can be very different costs and inflation rates depending on territory

Supply chain issues: this is possibly the biggest short term challenge. All of our insureds are exposed to this to some degree. Many report that delivery times for large items of equipment have doubled. This also extends to repairs, refurbishments, maintenance etc. While in many cases there can be some level of expedition in a loss scenario, this issue increases not only the BI but the PD quantum of a loss. The largest items of equipment tend to have the least opportunity to expedite and, of course have larger BI quantum attached to them. This is a frightening scale of change.

Humans: particularly in territories that are seeing the most rapid transition to less carbon intensive generation and grids, there is a shrinking pool of experienced staff, despite efforts to expedite or create speciality training. Training for a career path to be a senior operator or manager at a large thermal facility has long been an unattractive choice for young and mid-career staff! But with rapid large scale deployment of renewables, particularly wind, there are shortages of qualified technicians and engineers in these areas too.

DC: Do most insurers have a set rule of thumb, such as the BI rate should be a multiplier of the PD rate?

IG: Unlike many general property placements which carry a rate against total sum insured, for many years power underwriters have used BI multipliers to attempt to more accurately price BI coverage, and I think there are some rules of thumb out there. Whether these are entirely accurate is another matter.

DC: Having worked at a number of shops in your career and ones that are quite different in approach you will have seen a number of rating approaches first hand

IG: Yes, without mentioning names I’ve seen some very different approaches to “pricing/rating” models and systems and had the opportunity to see first-hand many different underwriters, including myself, use them in the real world.

I’m experienced enough (just) to have used the Fire Offices’ Committee rating on UK risks, which for many trades (but not power) had a level of data collection and rating sophistication that would surprise many younger underwriters.

As an overview I would say that at first glance rating our class should be relatively easy compared to many including general property because of the high level of homogeneity of the risk types we write: there are only a few styles of plant and very similar equipment steam plants, gas turbines, hydros, etc., all using very similar or identical ancillary equipment and grid systems.

However, a large part of our exposure is machinery breakdown a world where small differences and details can create very different outcomes.

By “pricing/rating” I really mean the whole deal” — i.e. pricing, deductibles, limits and terms.

The basis of any rating model is historic data collection and its statistical analysis. The first challenge for all heavy industry is that for much of it there are barely enough units of insurance to achieve statistical validity. In power I would say that the homogeneity I have mentioned gives us an advantage in this area, but insurers need to be insuring or having oversight of a good portion of the world’s power plants to achieve this.

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Accurate fine tuning of this becomes more difficult as small variables between ostensibly similar plants and equipment rapidly reduce the applicable pool of statistics. For example, two “identical” size CCGT’s using the same major equipment, or the same age in similar locations can be wildly different underwriting exposures depending on many factors from historical operation regime to, upgrade to turbines, maintenance etc. etc.. a long list. Although there is not much variation on the face of it in our business — when you get down to the detail, there is significant critical variety between different models, operating regimes and so on.

However, a rating engine driven by detailed statistics is not necessarily a panacea to accurate pricing/rating in the real world because we work in a market. Good luck trying to obtain the level of detail needed to populate such a model and write a portfolio of risks, even in a “hard” market, let alone a softer one

Because data is generally less plentiful than desired, there is inevitably greater incorporation of older data, which fortunately brings me to a challenge I omitted earlier.

This, which will continue for the foreseeable future, is the advance of renewable capacity into grid systems causing fundamental changes to the operating regime of older equipment, changes or extremes of change which it was not originally designed to accommodate.

These changes are and will be responsible for losses that would not otherwise occur and while these losses may be foreseeable by type it is less easy to forecast frequency; as they say in the world of investment, past performance is not necessarily a guide to the future.

Some of the renewable generation is evolving so rapidly that there is hardly time to build up an appropriate level of (detailed) data.

So I would say that pricing/rating models around the industry are generally not as sophisticated as perhaps some of our engineering customers imagine.

The current rate of change to factors that have a direct impact on rating/pricing is much greater than I have seen at any point in my career.

CW: So how do you differentiate as an underwriter?

IG: I think experienced class underwriters are particularly useful in all heavy industrial lines and particularly in power, although you would expect me to say that!

We do have a number of advantages in our class:

- many of the companies we insure have strong risk management departments with experienced, longstanding risk managers; the same can be said for their senior engineers. There is a willingness to



engage directly with underwriters and insurance engineers, allowing a deeper understanding of a client and their exposures and to identify those who practice what they preach — observing their actions over many years.

- our industry has long followed the model of using ex-power industry engineers to assist the underwriting process. Experienced underwriters can extract the most value from this work.
- and not forgetting you, I admit there is significant value in our brokers, particularly in London where we can interact directly, with power specific teams. However, this value only exists where broking teams have the appropriate level of knowledge and experience and this has undoubtedly wilted at some houses.

I think it is this knowledge, allied to knowledge of the industry itself, that is necessary to supplement pricing/rating models and allows power underwriters to differentiate much more clinically the very different exposures that clients bring.

DC: To what extent have the treaties of your underlying capacity providers impacted your underwriting guidelines, in terms of pricing and Nat Cat aggregates?

IG: Rokstone being an MGA means I no longer deal directly with treaty reinsurers, but I need to be aware of reinsurers’ current issues and views which are directly impacting who I answer to — our capacity providers. Across Rokstone, we have a crystal focus on quality underwriting to create portfolios that are desirable to our partners and provide an acceptable level of return and my portfolio needs to be tailored to achieve this.

Cat treaties have seen a stiff increase in cost and reductions in cover. These treaties reflect a much wider trend since they are cross-class. As humans put ever more value into areas exposed to Cat perils the cost of losses will continue to climb.

Specific to our sector has been the recent heavy losses to renewables. All these cat related losses suffered in the last few years could not have happened just a decade



prior: the assets didn't exist. There is no let-up in the build and proposed build out of renewable generation into Cat zones. Not surprisingly there is a paucity of historic loss statistics and catastrophe modelling will become more specific and accurate with time and future losses.

Whether at an insurer or an MGA, cat capacity is a limited commodity being fought over internally by different lines of business; each company has to determine how to apportion this valuable resource with rate of return being a foremost consideration.

DC: Have there been any particular type of losses that have impacted your book recently? Is the climate change debate impacting your regional appetite? For example, is the El Niño weather system something you are concerned about from your historical experience?

IG: Our portfolio is not currently subject to any particular loss type but we are certainly seeing losses with greater quantum than would be expected due the factors already outlined. I do feel there is a general uptick in the quantity of losses, but I accept this is a subjective view. I think given some of the issues highlighted one would expect it.

I think the power industry as a whole dealt admirably with the pandemic; however, not everything as performed as optimally as it would have been and this may be giving claims numbers a push.

Power assets are historically minimally impacted by weather and as "critical infrastructure" are generally designed and have the money available to be built to withstand severe/extreme weather.

Regarding El Niño specifically, the changing rainfall patterns it brings do impact certain regions from a Power perspective. For example, certain Latin American countries who have a significant installed hydro capacity, need to run their alternative/back-up thermal plants significantly more in dry years than wet and causing higher electricity pricing; underwriters will consider these running patterns.

DC: Do you see a shift in concern away from traditional MB-related exposures to Nat Cat perils?

IG: Definitely not. Cat losses have traditionally been only a small portion of the total loss in our class. Assets are large, expensive and often Cat-resistant; critical assets tend to get more consideration of cat loss as build than many others.

Historically power assets, particularly generation facilities have performed well against earthquake and hurricane. The notable exceptions are storm surge for assets located "on the beach" and very recently the rise of renewables, particularly solar, which is much more vulnerable to earthquake, wind, wildfire and hail.

This is not to say that cat perils are not considered but MB and operationally related losses will continue to dominate the record.

DC: When considering the renewal of loss-impacted programmes, what tends to be the balance that you strike between declining the business, imposing rating increases and amending the existing coverage?

IG: Losses are where we deliver on our promises to pay but are also a fantastic opportunity to learn more about the exposure that a client brings, whether that be the physical exposures, such as equipment and location or soft exposures such as "clout" with OEMs or attitude and actions. One would hope that most key knowledge is validated rather than learnt, especially with insureds of longer-standing. Any additional knowledge is a consideration for renewal.

Basic principles of insurance include the premiums of the many pay the losses of the few and premiums should equitably reflect the exposure an insured brings to the pool.

In a world of perfect knowledge and underwriting skill, a client suffering a loss would simply see the amended rates/terms applied to all similar clients due to losses changing the pricing/rating model. Back in Lime or Leadenhall Streets underwriters will have learnt more and this will be thrown into the mix of the normal renewal process where many “soft” factors will be added to pricing and rating models. These will include client relationships, broker relationships, the state of the market, competition, availability of reinsurance, overall view of the client, mix of the portfolio, and being entirely frank, in the case of an insured with multiple losses, what your boss (who doesn’t have a clue about the power class) will do to you if the insured has yet another!

DC: Are you seeing evolution of the worldwide gas turbine fleet speed up or slow down? Do you have any concerns around the impact of a strong pipeline of projects on operating exposures?

IG: Gas turbines were beginning to make their presence felt in the generation mix at the start of my career. The evolution during that period has been transformative in terms of output, efficiency, materials and sophistication of design and manufacture. I would say we have seen evolution speed up, driven on one hand by the tools of design and manufacture and the materials that the OEMs have available or developed and on the other by the unchanging demand for improved efficiency and requirements for turbines to serve ever changing needs in grid systems.

We are all gearing up for a world where there are many more much bigger turbines. We have already discussed how many grids are adapting to the changing profile of generation and the impact of must-run renewable assets. Large turbines are seeing an increasing number of start/stop/low generation conditions. How large turbines will fare from an insurance perspective in this new environment is a work in progress, these turbines being a mix of age, size and technology.

CW: Is anything really proven on a test bed?

IG: If you mean “proven” in an insurance sense the answer is no.

OEMs introduced full size test beds some years ago. They were undoubtedly a major advance for everyone involved — OEMs, generators and insurers.

In our day to day lives everything we touch has been tested to the nth degree, because it can be and consumers demand it. Testing a machine outputting hundreds of mega-watts is not so straightforward or relatively cheap, so hours on test beds are not testing like we might think of for an item we use every day.

The next evolution in the 2010s was OEMs putting fleet leaders into generation partners allowing a greater quantity of running hours. This is unquestionably a further advance.

All the OEMs opine to insurers that new models/designations are evolutions and not new. I am sure there are differing views. What can be said with certainty is that the largest turbines from all the OEMs have made huge leaps in physical size, output, efficiency and materials. Consequently, on the largest gas turbines in service today similar losses compared to the largest in service 10 to 15 years past have rocketed in quantum from a property damage perspective. As machines grow in output daily BI numbers obviously follow.

A typical compressor loss on a H technology turbine can easily be double to triple the past quantum of an earlier F unit, even allowing for inflation.

DC: With commodity prices rising across the globe, how has this affected your attitude to asset and BI valuations? Do you see evidence in your loss experience of under-deceleration? What do you want to see in underwriting submissions to ease your concerns?





IG: We have partially covered some of the answer to this question. We have always seen valuations from around the world that do not seem to be in line with those of many other clients even given regional variations, but rising prices have exacerbated this.

One issue I would highlight is new build CCGTs particularly with H technology. These highly sophisticated machines containing patented and proprietary parts can only be serviced by the OEM. They are sold with long duration agreements to provide parts/service maintenance.

I am not disputing the contract value of these projects, for which a healthy pipeline of new builds provide many references for up to date accurate new replacement cost, but from an insurer viewpoint they do not represent the appropriate starting point for premium development when rates used by many insurers are only marginally larger than those used for F units.

Insurers need to bear in mind that most turbine losses involve replacing parts, not purchase of new units and it is parts costs that is the relevant metric.

CW: How do you see the Power insurance market moving forwards? Do you see this current hardening trend continuing, or will the normal market cycle dynamics start to exert themselves with fresh competition entering the market? Or is the market not as volatile as it once was?

IG: I expect the current market environment to remain unchanged in the short term. There is still considerable claims activity impacting both conventional and renewable portfolios.

In the medium term, we would expect from cycle history that rate rises will level out and then reverse; however, given the level of change and therefore uncertainty it might well be that a continued level of increased claims activity will delay this.

A dynamic that does affect Power considerably at times during the market cycle is capacity from general property underwriters, both as reinsurance or in local domestic markets. The power market is only a small corner of general property so it does not need too much to cause change.

CW: Is it a concern to you that so much of the production process and rare earth metals are concentrated in certain regimes which may be challenging from a geopolitical perspective?

IG: From the perspective of insuring operational property, no I do not see this to be a particular problem. A shortage would drive-up equipment prices or in a worst case scenario create unavailability. This may impact a small number of losses but I would see the market moving to price or term this.

There are certainly commentators in general business areas, including the power and mining sectors, expressing views that in the medium term shortage of commodities may impact the attainment of current targets for carbon reduction, although these comments apply to a number of sectors, including transport.

Underwriters will be watching action prompted by the Inflation Reduction Act in the US with interest. The huge incentives may cause effects similar to “demand-surge” and not only in the US. This may extend to commodities/equipment and staff shortages.

It is undeniably interesting having the opportunity to meet many senior managers and engineers from around the world and hearing their views.

DC: Ian, many thanks for your time.



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