Browne Jacobson

How might AI impact insurer climate targets?

29 July 2024   Joanna Wallens

[Google's emissions were 48% higher in 2023](#) than in 2019. Google has said this is due to the increasing amounts of data required by its data centres due to the rapid growth of AI.

Google's target to reach net zero emissions by 2030 is now looking increasingly out of reach, with the tech giant stating: "as we further integrate AI into our products reducing emissions may be challenging".

Microsoft has faced similar issues with its emissions, which have risen by almost a third since 2020. These increases were largely due to the construction of data centres; infrastructure which is needed to support generative AI (Microsoft is OpenAI's biggest financial backer and is also building its own AI tools). Although Microsoft's direct energy-related emissions fell by 6.3 % between 2020 and 2023, emissions from its supply chain, which comprise the majority of its total emissions, jumped by almost 31%.

Microsoft has a number of climate goals, including to become carbon negative and achieve zero waste by 2030. Clearly, that goal will be extremely challenging, in light of the latest emissions figures.

Data centres are carbon intensive to produce, and energy intensive when they are running. AI involves considerably more power than general online activities. As it develops, and more companies make use of AI, it is expected to consume enormous amounts of electricity.

Sam Altman, OpenAI CEO, has said: "We still don't appreciate the energy needs of this technology". He has said that the future of AI depends on breakthroughs in clean energy and that "There's no way to get there without a breakthrough".

Over the last 15 years, a series of shocks have impacted Europe's power industry - the global financial crisis, the covid pandemic and war in Ukraine. The deindustrialisation of the European economy and power saving measures means that electricity demand has declined by almost 10% from a 2008 peak.

Energy intensive data centres for AI could easily change this trajectory. Nealy a fifth of Ireland's electricity is currently used up by data centres. This figure is expected to grow significantly, while Irish households are reducing their consumption. The National Grid expects that data centre electricity demand in the United Kingdom will rise six-fold in the next ten years.

Data centres have, for a long time, maintained a stable appetite for power. As workloads increased, they were countered by efficiency gains in electricity use. However, efficiency gains are highly unlikely to be able to keep pace with the AI revolution. In Europe, increases in electricity demand are predicted to reach a level that has not been seen in a generation, due to AI.

Additionally, data centres have large water demands. The sustainability reports of the technology giants show that they are also struggling with water usage and replenishing the water that data centres use.

Whilst on the one hand AI is expected to be able to tackle a number of climate change related tasks, such as more accurately predicting extreme weather events and assisting with measures to combat the impacts of climate change, ironically it may also be one of the largest contributing factors to increased energy demands.

According to Sasha Luccioni of Hugging Face: "Fundamentally speaking, if you do want to save the planet with AI, you have to consider also the environmental footprint [of AI first]... It doesn't make sense to burn a forest and then use AI to track deforestation".

What does this mean to insurers?

Insurers should be aware of the potential environmental impact of AI, and how using this technology could impact on their climate targets. Many insurers and insurance brokers have made commitments to reduce their greenhouse gas emissions. Many have also set targets to reach net zero emissions. Insurers should be mindful that their increasing use of artificial intelligence may threaten these climate goals.

Electricity costs of artificial intelligence may determine whether generative AI is worthwhile for certain uses in the insurance industry. If the 'old way' of doing things is more cost effective, there may be less of a market to use AI for such uses. Different AI models use different amounts of energy. Currently, very little information on energy use is available from AI developers upon which insurers can base their procurement decisions. In the future we may start to see energy ratings for AI. These may be useful to the insurance industry in determining whether an AI model is worth it for various uses, given other competing goals.

The environmental prerogative to ensure that AI does not lead to regression with regard to emissions is clear. Insurers have an important role to play in terms of investment, underwriting decisions and setting expectations from suppliers.

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