The energy policy dimensions of LegalTech

Categories
Research and innovation

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Dr Virág Blazsek is a Lecturer in Commercial, Corporate, and Banking Law and a Deputy Director of the Centre for Business Law and Practice (CBLP) at the University of Leeds School of Law. Her recent research, supported by the Michael Beverley Innovation Fellowship, examines FinTech hub development and financial sector transformation in secondary financial centres, focusing on Leeds, the US, and Singapore. The project highlighted the vital role of regional legal and tech clusters - like Leeds - in strengthening the UK's LegalTech sector, largely due to their strong underlying real economies.

The University of Leeds has been partnering with Whitecap Consulting, a major Leeds-based think tank and organiser of the LegalTech in Leeds Annual Conference, since its launch in 2022. This year, both Leeds University Business School and the School of Law were two key sponsors of the conference *(https://www.legaltechinleeds.com/article/updated-agenda-announcement-legaltech-in-leeds-conference-2025)*, which took place on Thursday 24 April 2025, at Cloth Hall Court in Leeds city centre.

Dr Virág Blazsek *(https://essl.leeds.ac.uk/law/staff/1546/dr-virag-blazsek)* (School of Law, University of Leeds) served as the academic lead from the University of Leeds for this year's conference, working closely with colleagues from the Business School. Other University of Leeds speakers included Dr Steven Montagu-Cairns (School of Law), who spoke on a panel about LegalTech and legal education; Danat Valizade (Professor of Quantitative Employment Research, Leeds University Business School) partnered with Keith Bermingham (Senior Account Executive, Clio) to deliver a breakout session on AI in small and medium-sized law firms; and Eric Mathews (KTP Associate, Leeds University Business School) joined with Angela Hesketh (Head of Market Development, PEXA) to explore how AI and machine learning are transforming property transactions.

Read on for a summary of Dr Virág Blazsek's research - "The Energy Policy Dimensions of LegalTech: A Crucial Foundation for a Thriving LegalTech Sector" - which she presented during her keynote speech at the conference.

Recently, on 8 May 2025, Sam Altman, the CEO of OpenAI testified at the US Senate *(https://www.techpolicy.press/transcript-sam-altman-testifies-at-us-senate-hearing-on-ai-competitiveness/)* and stated that "I can't think of anything more important than energy (…)".

This is a sentiment I echo. After talent, energy policy is the most critical infrastructure for LegalTech (technology and software used to streamline services in the legal sector) and AI-driven transformation in legal services. With energy demands from AI, cloud computing, and data centres set to double by 2030 *(https://iea.blob.core.windows.net/assets/34eac603-ecf1-464f-b813-2ecceb8f81c2/EnergyandAI.pdf)*, affordability, security, and sustainability must become priorities for legal and tech professionals.

The environmental impact of generative technologies (AI models that can create new content such as audio, images, text and code) - particularly their intensive use of electricity and water - makes energy a strategic issue, not just a compliance matter. Firms that lead on Environmental, Social and Governance (ESG) and carbon reduction will gain a competitive edge.

The UK is falling behind due to years of underinvestment and inconsistent energy policy, weakening its position relative to the US and China. The US's flexible, growth-oriented policies and China's central coordination contrast sharply with Europe's regulatory rigidity. Without reform, the UK risks brain drain (where highly-skilled or educated individuals leave for another country) and tech-sector migration to regions with more affordable energy.

Below, I have highlighted the broader infrastructure - energy, education, transport, and finance - needed to support tech-driven legal services, urging that energy be placed at the heart of the UK's LegalTech strategy.

The importance of Artificial Intelligence (AI) in legal services

Humans interact with AI in three ways: as users, as developers, and as programmers. These interactions are increasingly conducted not through traditional programming languages, but in natural language - most commonly English.

AI, particularly generative AI (Gen AI), is increasingly important in the legal sector due to its time- and cost-saving potential both for lawyers and clients. Gen AI can save time and money, for example, through faster and more accurate data gathering and data processing, training activities for lawyers, and legal document-drafting. Law firms, in-house legal departments, and public bodies have been exploring AI applications for almost a decade, with this trend accelerating notably from around 2023. The sooner legal service providers engage with new technologies, the more competitive they will be.

Some international law firms are already embracing this future through developing and using AI tools, like in-house Gen AI chatbots built on GPT-4 and hosted on Microsoft's Azure OpenAI infrastructure. This digital transformation is not limited to legal service delivery. AI can be used for legal educational purposes as well. But, legal service-providers remain mindful of the limitations and responsibilities that come with using Gen AI. AI tools are designed to complement, not replace, human lawyers - automating repetitive tasks and enabling professionals to focus on complex, strategic work. Ultimately, the legal sector's evolution will be defined by how intelligently and responsibly it chooses to adopt AI.

Why is growing reliance on technology and Gen AI an issue in relation to energy?

The most important issues as to Gen AI and energy are threefold. First, it is predicted that by 2030, humanity will consume twice as much energy as today *(https://iea.blob.core.windows.net/assets/34eac603-ecf1-464f-b813-2ecceb8f81c2/EnergyandAI.pdf)*. This estimation is based on the current level of technological development.

One possible solution to overcome this is to develop more energy-efficient hardware that might moderate the increase of energy needs going forward. The above estimations are based on our current technological development level and in the longer term, energy needs can be brought to a more sustainable level even with growing reliance on digital technology.

Humanity's current energy production is still fundamentally natural oil and gas-based (one needs some of these traditional energy sources to produce nuclear energy, a major source of electricity production, and green energy sources have their limits as to storage and consistent availability, for example). There have been a lot of positive changes in terms of reliance on more diverse energy sources in the UK, but some ill-chosen energy policy decisions over the past four-five decades, such as trying to shift away from nuclear energy without having another realistic, equally reliable energy source and overreliance on importing electricity from Norway have made the UK somewhat vulnerable.

Technological developments and an increasing reliance on digitalisation, including in strategic sectors, has increased the importance of a country's energy independence and access to reliable energy at globally competitive prices. In this latter respect, Europe has lost its competitiveness, mostly because of cutting ties from Russia, the geographically closest country of source of natural oil and gas. (However, it needs to be mentioned, that European countries still buy Russian oil and gas via India and other intermediaries *(https://www.politico.eu/article/eu-vladimir-putin-russia-fuel-imports-india-war-in-ukraine-price-cap-sanction/)*.)

To overcome this, the UK could build strategic partnership with the US in terms of energy import. The UK should also aim at expanding its technology export to the US market. This is because the UK is highly innovative but lacks sufficient market size to boost financing and income for its innovators.

Legal service providers and technological companies cannot remain globally competitive if they have a lack of access to reliable and sufficient energy at competitive prices. Therefore, the UK must prioritise its energy policy as a major building block of future technological development. Law

firms should develop expertise in energy law and develop their energy strategies and make those strategies visible through standardisation and other appropriate ways, such as corporate reports and client newsletters.

The UK's energy situation

The UK's current energy mix is sufficient and diverse but due to past policy decisions, the country has some vulnerabilities as well. One of them is a larger reliance on gas and electricity import from Norway *(https://www.niauk.org/uk-power-imports-hit-record/)*. The vulnerability there is that that electricity comes through a subsea cable and under the current geopolitical situation, in case of a terrorist attack, major damage to that cable would be capable of causing major disruptions to electricity supply in the UK.

Another vulnerability is a traditionally (although decreasingly) hostile, approach to nuclear energy. In this respect, there has been a shift in the past decade or so. But, building nuclear plants required enormous investments, those are the most expensive types of construction projects, and they take over five years to construct *(https://world-nuclear.org/information-library/economic-aspects/economics-of-nuclear-power)*. So, while plans are in place, building new capacities will take time - a minimum five years in the UK. Small modular reactors (SMRs) are a faster and less costly alternative *(https://www.oecd-nea.org/upload/docs/application/pdf/2021-03/7560_smr_report.pdf)* and have become more important on both sides of the Atlantic.

I am confident that there will be a technological breakthrough in the next three decades in terms of humanity's energy production. Investments in fusion and hydrogen alternatives are important, but there must be a balance between short-term and long-term interests when it comes to energy policy, and the European region has not gotten that right in the past several decades causing a very challenging situation and vulnerabilities when it comes to the energy independence and global competitiveness of the region.

Strategic recommendations for law firms

1. Forge a Strategic UK–US Energy Partnership: To maintain global competitiveness, the UK must secure and diversify energy imports—especially gas—and co-develop future-ready energy strategies alongside the US.

1. Legal and tech firms should adopt energy-integrated ESG strategies by using green cloud platforms, pursuing certifications like ISO 50001 *(https://www.iso.org/iso-50001-energy-management.html)* or PAS 2060 *(https://www.bsigroup.com/en-GB/products-and-services/standards/pas-2060-carbon-neutrality/)*, and making sustainability efforts visible to clients and stakeholders. LegalTech's future relies on skilled talent, strong financing, and resilient digital infrastructure. Despite a smaller market and weaker financing than the US, the UK can lead through strengths in data security and regulatory stability.

2. Implement Smart Incentives: Instead of direct public investment, the UK should offer tax incentives and regulatory reforms to encourage private investment in energy-efficient infrastructure, including small modular reactors (SMRs). SMRs, with their faster, more flexible, and cost-effective deployment, could help meet the growing energy demands of AI-driven sectors like LegalTech. However, real progress depends on strong public-private collaboration, workforce upskilling, and international coordination on supply chains and safety standards.

Conclusion

Without an energy-conscious and forward-thinking infrastructure policy, the UK's LegalTech ambitions will be constrained by rising costs and strategic vulnerabilities. To lead in LegalTech, the UK must first get energy - and its broader infrastructure - right.

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