AI Reg Lab October 2025

The Ofgem AI Regulation Lab (AI Reg Lab) held on 15 October 2025 brought together energy sector companies and their innovation partners with the Ofgem's AI Policy team and independent experts to explore the responsible use of artificial intelligence (AI) in the energy sector. To support transparency and shared learning, Ofgem committed to publishing findings from each AI Reg Lab engagement.

The AI Reg Lab focused on two hypothetical AI applications in separate sessions. One AI use was aimed at improving consumer support through a Generative AI chatbot with sentiment analysis to support identification of vulnerable consumers for human help, and particularly for more complex issues. The other AI use was to enhance infrastructure planning using machine learning to reduce delays and increase effectiveness of service.

Both AI Reg Lab sessions surfaced several themes including fairness, governance, data ethics and privacy in the scenarios discussed.

The AI Reg Lab is a practical exercise that provides energy sector applicants with:

- a valuable opportunity to stress test their hypothetical or real AI uses against our current ethical AI use in the energy sector guidance and broader energy regulatory framework
- the chance to explore the potential risks and impacts of their AI use
- a guided discussion of the regulatory implications of the AI use with an independent panel of AI and regulatory experts.

Participation in the AI Reg Lab does not imply regulatory authorisation, nor does it imply Ofgem's endorsement of any AI use.

Themes and high-level findings

Several cross-cutting themes emerged from the AI Reg Lab discussions including:

Governance and accountability: Participants emphasised the importance of human oversight, audit trails, and mechanisms like 'kill-switches' to maintain control over AI systems and the outcomes.

Fairness and explainability: Concerns were raised about misclassification risks and the need for transparent, explainable AI decisions, especially when outcomes may affect vulnerable consumers or infrastructure investment.

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Data ethics and privacy: The use of synthetic and triangulated data, such as smart meter and public service data, prompted discussions on consent and data drift.

Digital exclusion: Participants reiterate the importance of AI systems being designed to avoid excluding digitally vulnerable consumers, ensuring equitable access and customer support.

Environmental sustainability: Views were shared on potential trade-offs in relation to the energy consumption of AI systems used in the energy sector and the outcome of those AI uses such as the intended more efficient support to energy consumers.

Skills and culture: Building AI literacy across a range of teams across an organisation and avoiding siloed AI development were seen as essential for successful integration of AI in energy sector companies by some participants.

Regulatory alignment: A reminder that all AI uses should align with existing energy sector obligations was highlighted.

The themes discussed are being carefully considered as part of regular review of our regulatory approach to AI use in the energy sector, including our AI guidance first published in May 2025.

The use of safe and responsible AI within the energy sector has substantial potential and we recognise the benefits it can offer consumers.

In addition to Ofgem's regulatory oversight role, it is for participants in the AI Reg Lab to ensure their own compliance of their AI uses with any applicable rules, regulations and laws.

These AI Reg Lab findings reflect views expressed by participating parties at the October 2025 Ofgem AI Reg Lab and do not represent the views, policies or regulatory positions of Ofgem. These summary findings do not constitute or imply compliance advice or authorisation, nor do they constitute endorsement of any specific AI systems, technologies or use cases (hypothetical or actual). All AI uses have been anonymised to preserve confidentiality and avoid attribution to any individual or organisation

How to take part in the AI Reg Lab

The next AI Reg Lab is due to be held on Wednesday 25 February 2026. The deadline for submissions is 11:59pm on Monday 19 January 2026. We welcome submissions on a rolling basis for future AI Reg Labs via our Ofgem AI Reg Lab submission form. More information about the AI Reg Lab is available here: Ofgem AI Reg Lab call for submissions | Ofgem.