

House of Commons: Written Statement (HCWS320)

Department for Energy Security and Net Zero

Written Statement made by: **Minister for Local Energy and Jobs (Martin McCluskey)** on 08 Sep 2026.

AI for Energy Vision publication

I am tabling this statement to inform members of the publication of the Department for Energy Security and Net Zero's AI-enabled clean energy system vision.

Artificial Intelligence has the capacity to transform jobs, businesses and industries, drive productivity and boost long-term economic growth, including delivering a more affordable, reliable and responsive energy system for consumers.

In the energy system, artificial intelligence technologies can make more efficient use of assets, meaning we need to build less at lower cost while improving the quality of service for consumers. Put simply, better forecasting, planning and operation reduce waste and avoid precautionary overbuild, putting downward pressure on system costs and, ultimately, household bills and emissions. For consumers, this means a system that is not only lower cost, but more predictable, more responsive to demand, and better able to integrate technologies such as electric vehicles, heat pumps and flexible tariffs.

With world leading deployment of renewable generation, strong scientific and innovation capabilities, deep capital markets and a skilled energy workforce, the UK is well placed to lead the next phase of energy system transformation. Many countries around the world have energy systems facing similar challenges. UK-based companies solving these with AI could export their products to markets around the world.

AI is already being adopted across the energy system, and this will continue with or without government action. But as with previous technologies, adoption may be uneven, slowed by structural challenges, or pose new risks to the energy system and the consumer.

To this end, government proposes setting three high level principles to guide AI deployment in the energy system, that it should:

- Lower bills for households and businesses
- Increase the efficiency of the system and support decarbonisation
- Ensure energy security

Government's role is not to determine which AI models or tools should be used in particular functions, but to set clear public expectations, shaping the conditions for adoption. Government's role is also to ensure that deployment by market actors is facilitated where it delivers system value and constrained where risks are unacceptable so that AI deployment is safe, ethical and aligned with societal expectations.

This document sets out early-stage thinking on how AI could transform the energy system over

time, using two complementary lenses. First, it explores how existing and near-term applications could scale and connect across networks, markets, assets and end use - a plausible evolution in which AI becomes more embedded while strategic intent, governance and accountability remain firmly human-defined. Second, it uses a deliberately stretching “transformational” scenario to test what might change if AI autonomy and system integration advance rapidly, and what that would imply for control, accountability and governance in a safety-critical system.

This Vision is intended as an initial articulation of opportunities and risks rather than a definitive assessment, and its core purpose is to test our framing and emerging positions with industry and other stakeholders. Following publication, we plan to deepen engagement and continue building the evidence base, including in response to the external review led by the Government’s AI and Clean Energy Champion, which is being published at the same time and makes recommendations on rapid, safe and effective deployment pathways in electricity networks.

This engagement and evidence will inform prioritisation decisions on where and how government should act to support adoption and manage risk, culminating in the UK’s upcoming AI for Clean Energy Strategy.