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AI ANALYSIS

AI-Powered Decarbonisation: The National Energy System Operator's Journey

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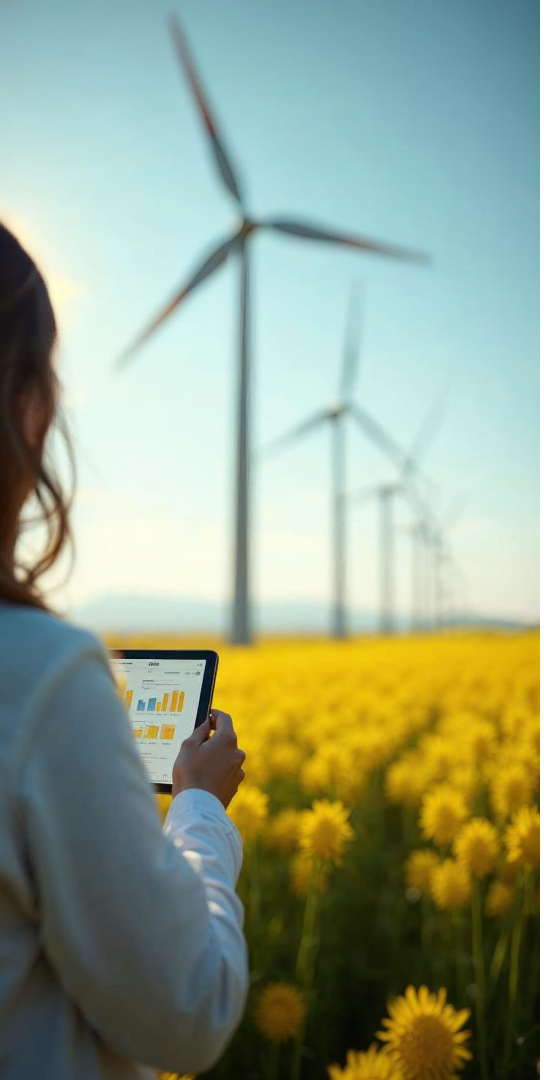
SUMMARY

The session focused on the journey of the National Energy System Operator (NISO) in leveraging AI for decarbonisation and managing the UK's complex energy grid. Darren Hollyoag, head of delivery for digital data technology at NISO, discussed the organisation's transformation since becoming independent last October. He highlighted the broad spectrum of responsibilities including HR, finance, procurement, and strategic energy planning, emphasising NISO's role in balancing the grid and ensuring the integration of various energy sources, such as gas, hydrogen, solar, and wind. Hollyoag explained that the UK's target for achieving net zero carbon emissions by 2030 has accelerated the need for AI to handle the exponential growth in data and the complexity of energy system operations.

AI has become indispensable in NISO's operations, enabling rapid analysis, reporting, and scenario modelling that would be impossible to achieve manually. Hollyoag detailed the cultural shift within the organisation, moving from traditional methods to AI-driven processes. He mentioned the creation of a Centre of Excellence to manage AI demand and ensure the right capabilities and skills are in place. This centre serves as a guiding pillar, helping NISO navigate its AI journey by starting with small use cases and gradually scaling up. Hollyoag stressed the importance of industry-wide collaboration in achieving decarbonisation goals, noting that NISO's efforts are outward-facing and responsive to the needs of various stakeholders.

The discussion also covered the challenges and successes in adopting AI, particularly in gaining trust from employees and leaders. Hollyoag shared examples of AI's efficiency, such as reducing the time for certain analyses from eight hours to 35 minutes. He highlighted the importance of continuous re-education and messaging to ensure acceptance and effective use of AI across the organisation. The session concluded with a focus on the collaborative approach NISO has taken, embedding tech specialists within different business areas and leveraging commercially available AI technologies like Microsoft Copilot and GPT functions. This holistic approach has positioned NISO as a leader in using AI to meet the UK's ambitious decarbonisation targets.



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TAKEAWAYS

AI is critical for managing complex energy data and achieving decarbonisation targets

The exponential growth in data and the complexity of energy system operations make AI indispensable for rapid analysis, reporting, and scenario modelling. NISO's use of AI has significantly improved efficiency, reducing the time for certain tasks from hours to minutes, and is essential for meeting the UK's ambitious target of net zero carbon emissions by 2030.

Continuous re-education and messaging are vital for successful AI adoption

Gaining trust and acceptance of AI within an organisation requires ongoing re-education and consistent messaging. NISO has implemented a digital data AI quotient to ensure employees understand and embrace AI, addressing fears of job loss by demonstrating how AI can enhance efficiency and effectiveness in their roles.

Industry-wide collaboration is essential for achieving decarbonisation goals

NISO recognises the importance of moving forward together with the entire energy sector to achieve decarbonisation targets. By collaborating with various stakeholders and embedding tech specialists within different business areas, NISO ensures a holistic and responsive approach to AI adoption and scaling, benefiting the entire industry.

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