



# Net Zero Week

## Webinar Summary

Energy data, Digitalization, and AI enablers of a digitalized energy sector

**Date:** Tuesday, 24 September 2024

**Time:** 14.00 – 16.00 GMT

**Location:** Online

**Facilitated by:** Sebastiaan Van Dort, Director of Sustainability and Energy, BSI



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## Introduction

The journey towards a sustainable energy future is accelerating, with digital tools, energy data, and artificial intelligence (AI) leading the way. Our recent Net Zero Week webinar shed light on these transformative forces, featuring insights from top industry experts who are shaping the way we think about and use energy.

### The UK's Pioneering Net Zero Journey

The UK's legislation to achieve Net Zero emissions by 2050 has led to a series of initiatives across the energy sector. Despite encountering global challenges such as the COVID-19 pandemic and significant political shifts, the commitment to digital transformation remains unwavering. Highlights from the discussion include:

- The UK's Net Zero law has set the bar for sustainable energy policies.
- Recent challenges have tested but not derailed the pathway to achieving Net Zero.
- Digital tools and AI are recognized as crucial in steering the energy sector toward its ambitious goals, facilitating more efficient and informed approaches to energy management.

### The Impact of Energy Data and Digitalization

Digitalization in the energy sector is no longer just an option but a necessity. It plays a pivotal role in reducing carbon emissions and enhancing the efficiency of energy systems. Digital technologies help streamline operations, facilitating the shift from fossil fuels to renewable energy sources. They also empower stakeholders by providing access to real-time, actionable data, which is essential for making informed decisions.

## AI as a Game Changer in Energy Management

AI is transforming the energy landscape by enabling smarter, more responsive energy systems.

It not only optimizes the balance between energy demand and supply but also predicts maintenance needs, enhancing system reliability and lifespan.

These capabilities are crucial for minimizing downtime and extending the life of energy infrastructure, making energy systems more resilient and efficient.



## Navigating Challenges and Seizing Opportunities

As we expand our digital infrastructure, we also open new challenges, particularly in cybersecurity. The discussion recognized:

- The need for strong security measures to protect increasingly interconnected systems from potential threats.
- The importance of standards and regulatory frameworks to ensure data privacy and system integrity.
- The energy demands of AI and data centres also brought up concerns about sustainability. The sector is urged to consider not just the technological benefits but also the environmental costs of these developments. Effective strategies include improving energy efficiency and focusing on sustainable AI practices that reduce environmental impact.

## The Role of Standards in Energy Transition

Standards are crucial for integrating new technologies and ensuring they work harmoniously within existing frameworks. They facilitate innovation and help maintain reliability and security across the energy network, ensuring that new advancements contribute positively to the sector.

## Looking Forward: Strategic Insights for a Sustainable Future

Experts provided a roadmap for future initiatives, emphasizing the need for sector integration and updated policies that support rapid technological development. Enhanced collaboration between government bodies and private sector players is also seen as key to fostering an environment conducive to innovation.


The webinar highlighted the vital roles of data, digitalization, and AI in moving the UK's energy sector toward its Net Zero objectives. While the journey is complex and filled with challenges, the strategic use of these technologies presents a promising path to a resilient and sustainable energy future.

**Watch the webinar** to uncover how digitalization and AI are transforming energy for a sustainable future.





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