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Shaping the Future of Building Services in 2026

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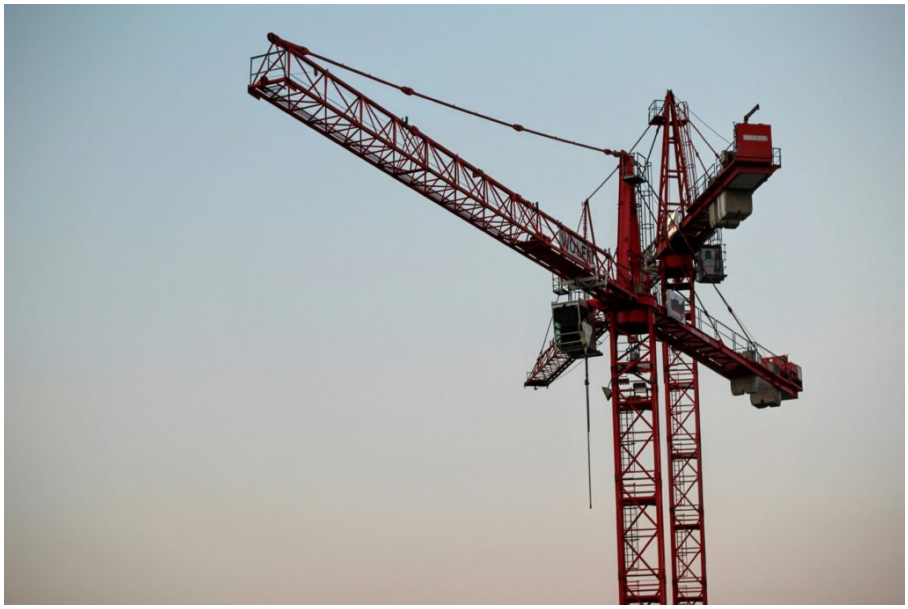

By Dr Anastasia Mylona, Technical Director, CIBSE

The building services engineering sector is entering a transformative period. From decarbonisation and digital innovation to evolving regulations and changing occupant expectations, 2026 will present both challenges and opportunities for professionals shaping the built environment.

From design to verified performance

2026 will see a stronger emphasis on measuring buildings' operational performance. Schemes such as NABERS, MEES, and UK Net Zero Carbon Building Standard UKNZCBS are encouraging investment in Digital Twins, advanced monitoring, and optimisation of building systems. Standardised data protocols and reliable performance metrics are critical to ensuring buildings operate as intended, bridging the gap between design intent and in-use outcomes.

Driving the low carbon heating revolution

The adoption of low carbon heating solutions, particularly heat pumps, is accelerating across homes and commercial buildings. Upcoming regulatory updates, including revisions to the Future Homes Standard and EPC frameworks, will further strengthen incentives. Engineers will need expertise in low-temperature system design, integration with heat networks, and emerging market mechanisms to deliver efficient and affordable heating solutions. Guidance from CIBSE, such as *AM17 Heat Pump Installations for Large Non-Domestic Buildings*, *TM51 Ground Source Heat Pumps*, and the *Domestic Heating Design Guide*, is equipping professionals to navigate this shift.

Expanding carbon accountability across the building lifecycle

The focus on carbon is moving beyond operational energy to encompass whole-life carbon (WLC). Professionals are increasingly required to assess and reduce embodied carbon in mechanical, electrical, and plumbing systems, whether for new developments or major refurbishments. Standardised methodologies, material selection strategies, and reporting frameworks are becoming essential. Tools such as *TM65 Embodied Carbon in Building Services*, *TM67 Electrification of Buildings for Net Zero*, and the *UK Net Zero Carbon Buildings Standard* are helping engineers to calculate the embodied carbon of MEP equipment and make informed design decisions.

AI and automation in engineering workflows

Artificial intelligence is beginning to transform engineering design. While AI increases speed and accuracy, robust validation and accountability frameworks are essential to maintain quality, safety, and sustainability standards. CIBSE's AI working group is working on developing such a framework for the industry.

Enhancing safety and regulatory compliance

The Government's Building safety regulatory framework continues to evolve, with further reforms expected in 2026 and the establishment of a Single Construction Regulator by 2028. CIBSE supports professional competence through collaboration with the Engineering Council, Construction Leadership Council, and initiatives such as the Building Safety Working Group. These efforts ensure CIBSE can support the government and the industry in the successful implementation of the proposed regulatory changes.

Optimising thermal comfort and climate resilience

Urban densification and climate change are heightening the risk of overheating in both residential and commercial buildings. Engineers and architects must balance passive design strategies with effective ventilation, acoustics, and indoor air quality to achieve thermal comfort. CIBSE guidance, including *TM52 The Limits of Thermal Comfort* and *TM59 Overheating Assessment Methodology*, and the recently released future weather files, support professionals in mitigating these risks while maintaining occupant wellbeing.

Preparing the workforce of tomorrow

The demand for multi-disciplinary engineers skilled in digital tools, environmental performance, and regulatory compliance is increasing amid global skills shortages. Investment in technical education, flexible learning pathways, micro-credentials, and CPD programmes is essential. CIBSE continues to support professional development through its publications, conferences, and online learning platforms.