

The energy visibility gap:

Why businesses must rethink
energy management to achieve
economic growth

e-on

Contents

Executive summary	2
The energy management paradox	4
Why understanding energy use comes first.....	5
From reactive to proactive energy management.....	6
The limitations of legacy building management systems.....	8
Building management systems vs energy management systems: Why both matter.....	9
The business case: Cost, carbon and operational efficiency.....	10
How legislative change is accelerating demand for energy management.....	11
The future of smart energy management.....	14
Strategic recommendations.....	15
Conclusion: Closing the visibility gap.....	16

Executive summary

Across the UK economy, organisations are setting ambitious goals for economic growth. We conducted some research with UK businesses and every respondent, irrespective of sector and size, said that energy management is at least “reasonably important” to their operations. Almost half (47%) of these businesses regard energy management as “absolutely crucial” and acknowledge that it directly impacts their bottom line. Yet despite this recognition, only 17% of organisations have implemented an energy management system capable of providing the visibility and insight needed to act on that ambition. This

suggests a fundamental conflict: businesses understand that energy performance matters, but most lack the systems required to measure, understand and optimise it.

Traditional building management systems (BMS) have historically focused on remote management of the business’ premises and equipment. While these systems play an operational role in the running of a business they often act reactively, identifying issues only after comfort has been disrupted, complaints have been raised or energy has already been wasted. The result for many organisations is a



cycle of maintenance, disruption and avoidable cost.

Emerging newer generations of BMS and integrated energy management systems (EMS) are transforming this model by enabling proactive monitoring, remote diagnostics and advanced analytics. These capabilities help organisations identify inefficiencies earlier, respond swiftly to issues, and make evidence-based decisions that reduce both cost and carbon emissions.

In this whitepaper, we explore why visibility of energy use is foundational, how proactive systems drive better outcomes than reactive ones, and why integrating BMS and EMS provides the data and intelligence necessary for performance improvement. Along the way, we share real-world insights and quotes from industry experts that reinforce the value of this shift. These real-world success stories from organisations ranging from major retailers to cultural institutions demonstrate how improved data and systems are delivering measurable energy savings, enhanced operational insight and improved occupant comfort.

Businesses are already managing significant costs, and high energy bills represent another cost burden they are having to absorb. This can lead to struggling companies being forced to

pause expansion, scale back operations and reduce hiring. There are calls for the government to introduce support with the cost of energy for businesses but, for the meantime, this highlights the importance of the role played by energy management systems. If energy prices are unsustainable for businesses, then using less energy is the most effective way to reduce the financial burden of powering their operations.



While nearly half of UK businesses consider energy management to be crucial to their operations, the current take-up of energy management systems is at odds with this.

Businesses that do not get a handle on their energy usage will struggle to both meet their financial targets as well as their carbon reduction targets.

The energy management paradox

Many UK organisations acknowledge that energy management is essential, yet far fewer have adopted the systems necessary to fully act on that understanding. While 47% of businesses consider the management of their energy use to be crucial to their operations, just 17% of businesses have implemented an energy management system. This creates what can be described as an energy visibility gap. This energy visibility gap is a situation in which organisations have high financial and efficiency goals but lack the systematic data insight to measure performance and drive improvement.

47%

of businesses say energy management is crucial to their operations

Without granular visibility, energy management remains a strategy without a practical foundation. Decisions are driven by intuition or broad targets, rather than detailed insight into how energy is actually consumed across buildings, systems and occupancy profiles.

After all, you cannot manage what you cannot measure.

17%

of businesses have implemented an energy management system

This visibility gap is particularly evident when comparing sectors. In manufacturing, one of the most energy intensive industries, E.ON-led research has shown that nine out of ten organisations have either adopted, or are at least exploring, energy management systems. This is an industry where energy use greatly impacts the organisation's bottom line, and perhaps also their sustainability obligations. By contrast, in the hospitality, leisure and retail sectors, energy use can directly affect customer comfort and experience, upon which these businesses rely. And yet only around half have explored solutions for energy management, and only half of those report as having a solid understanding of their energy use.

This divergence creates urgency for sectors with complex, multi-site footprints and tight operational margins. For these organisations, limited insight into energy behaviour obscures opportunities to reduce waste, control costs, improve service quality and retain customers.

Why understanding energy use comes first

Understanding energy use is foundational to effective performance improvement. Buildings are complex systems influenced by technical, behavioural and environmental variables. Heating and cooling systems, lighting, occupancy patterns and weather all interact in ways that affect energy use. Without high-quality data, inefficiencies remain hidden and opportunities to optimise performance go unrealised. This is compounded by multiple-site businesses, particularly those where the BMS is managed by local managers rather than centrally.

Sunil Shah, author of the IWFM Energy Management Good Practice Guide and Managing Director of Acclaro Advisory, emphasised during a [recent industry webinar](#) that a deep understanding of energy behaviour is critical to energy management success. According to Shah, organisations must assess how energy is used and understand the contextual drivers behind that usage in order to prioritise interventions and make informed decisions.

Data quality and accessibility are therefore essential prerequisites. Without reliable data, organisations risk making decisions based on incomplete pictures and expend resources on projects that may not deliver the intended impact.

Energy management is increasingly recognised as a core competency within Environmental, Social and Governance (ESG) frameworks.

Initiatives such as the Sustainable Facilities Management Index (SFMI) position decarbonisation as a key criterion and emphasise the importance of forward planning and data competency. Within this framework, understanding energy behaviour is not optional, it is central to demonstrating progress and accountability.

Real-world examples highlight this principle in action. At London's [Canary Wharf](#) estate, sub-metering and energy audits provided detailed insight into energy flows across a complex building portfolio, enabling prioritisation of optimisation actions based on actual usage rather than assumptions. At [Fairfield Halls in Croydon](#), an arts centre which regularly hosts theatre, comedy and live music, remote monitoring, utilising 120 submeters across the building, delivered clarity around system performance, allowing facilities teams to identify patterns and anomalies that would have been missed by manual inspection alone.

Both of these cases demonstrate the increasing understanding that energy insight should precede intervention, and that data forms the foundation of a credible, effective energy strategy.

The learnings are clear: You cannot optimise what you do not understand.

From reactive to proactive energy management

Traditional approaches to energy and facilities management are often reactive. Issues are identified only after occupant comfort has been compromised or complaints have been raised, impacting on ultimate business performance.

Engineers are dispatched to site to diagnose faults, and corrective action is taken only after inefficiencies have already translated into wasted energy, unnecessary cost and, in some industries, customer dissatisfaction.

This approach is not only inefficient, but also costly. Reactive maintenance tends to incur higher labour costs, disrupt operations and leave energy waste unchecked until it becomes a systemic problem.

Proactive energy management, enabled by modern BMS and EMS technologies, flips this model on its head.

Rather than waiting for failures to occur, proactive systems continuously monitor performance, identify anomalies early and enable remote intervention before issues escalate.

London Museum have reduced their energy spend by up to

35%

through proactive BMS maintenance

The reactive approach



The proactive approach



The energy visibility gap

As Nick Westlake, Energy and Service Delivery Manager at E.ON Controls, explained during a recent discussion: "Being able to connect buildings to monitor systems means that 75% of calls that we receive can be resolved over the phone by making a change remotely or giving the right advice to an HVAC engineer." This ability to resolve many issues remotely not only reduces engineer callouts and wasted time but also improves responsiveness and service quality.

Through continuous monitoring and smart alerting, proactive systems enable earlier fault detection and remote resolution. Predictive optimisation becomes possible as data trends reveal patterns that would be invisible in a reactive model. The outcome is a more reliable, cost-effective and comfortable environment for building occupants. Organisations with large estates also benefit from standardising setpoints and control strategies. A central view

of multiple sites allows performance to be benchmarked, best-practice configurations to be rolled out and deviations to be identified quickly. Where once facilities teams might have made adjustments after complaints were raised, they can now act on system alerts before comfort is affected.

The case of the London Museum illustrates this point clearly. Through proactive BMS maintenance and continuous support, the institution experienced substantial energy savings (in some cases up to 35% lower energy spend) by ensuring systems were always functioning optimally, rather than only when faults were obvious. The shift from reactive repair to proactive performance management proved both more efficient and more effective.



The limitations of legacy building management systems

Despite the clear benefits of proactive energy management, many organisations continue to operate legacy BMS installations that lack the analytical capability required for modern energy optimisation.

Legacy systems often only provide basic control of HVAC, lighting and plant equipment but provide limited integration with broader data sources or analytical tools. This can result in fragmented data, manual reporting processes, and a lack of insight into estate-wide performance.

Without integrated data, facilities teams are constrained to localised information, unable to identify patterns or spot inefficiencies across sites. Manual analysis of separate data streams is labour-intensive and prone to error, limiting the ability to draw strategic conclusions about energy use.

This distinction underscores the point that legacy systems may control equipment, but they do not optimise performance. In an era of rising costs, stringent carbon targets and digital transformation, organisations require systems that provide both operational control and analytical insight.

An example from the [defence sector](#) shows these challenges. Disconnected legacy systems limited real-time diagnostics and restricted oversight across buildings. This lack of integration made it difficult to identify performance issues or implement coordinated improvement strategies. When the site transitioned to a more modern, connected energy platform, visibility and responsiveness improved, enabling facilities teams to work with a comprehensive view of performance rather than isolated snapshots. This visibility created opportunities for efficiencies to be identified, which led to a 16% reduction in energy use over a winter shutdown. This equated to a financial saving of £1,600 per year.



Building management systems vs energy management systems: Why both matter

To understand how organisations can address the energy visibility gap, it is important to clarify the difference between building management systems and energy management systems, and why both are necessary components of a modern strategy.

A building management system is primarily an operational platform. It automates and manages physical infrastructure such as heating, ventilation, air conditioning, lighting and other mechanical systems. By centralising control, a BMS ensures that these systems operate according to defined schedules and setpoints, maintaining environmental comfort and system reliability. Well-installed and well-configured building automation systems can reduce energy usage significantly, in some cases up to 30% compared to older systems, by automating control and ensuring efficiency is maximised.

An energy management system, by contrast, focuses on data, analytics and insight. EMS platforms aggregate energy consumption data from utilities, building systems, weather feeds and occupancy patterns. They analyse that data to identify where energy is being used and wasted, flag anomalies, benchmark performance and, in more advanced implementations, support predictive analytics. Modern EMS platforms often integrate real-time data, remote monitoring and machine

learning, making them a central intelligence layer rather than a simple reporting tool.

The combination of a BMS and an EMS creates an ecosystem in which operational control is informed by actionable insight. For example, while a BMS might control HVAC settings on a schedule, an EMS can analyse occupancy patterns and weather data to recommend adjustments that reduce energy use without compromising comfort. In turn, these recommendations feed back into the BMS for automated execution.

Large retail estates provide real-world examples of this integrated approach. Organisations such as [Tesco](#) and [Marks & Spencer](#), through their work with E.ON, have leveraged combined BMS and EMS platforms to consolidate utilities data, building controls and advanced analytics across nationwide portfolios. In Marks & Spencer's case, they were able to reduce their energy by 34% across 550 stores, helping them save money and reach their ambitious carbon reduction targets in the process. This integration enables centralised oversight, consistent optimisation and strategic performance improvement at scale.

The business case: Cost, carbon and operational efficiency

At the heart of the argument for investing in proactive energy management is a clear business case that spans financial performance, operational excellence, and environmental impact.

Cost reduction is often the most immediate concern for organisations. Improved visibility and proactive management can reduce waste by identifying issues before they escalate and allowing adjustments to be made in real time. Remote diagnostics reduce the need for engineer callouts, while standardisation across estates minimises variation and inefficiencies. By aligning controls with actual usage patterns rather than static schedules, organisations reduce unnecessary consumption and optimise asset utilisation.

Bute Hall has reduced its operational costs by

85%

through building energy management systems

Operational performance is improved as well. By using data to anticipate issues, facilities teams can minimise disruptions and provide a more comfortable environment for occupants. This reduces complaints, enhances customer

satisfaction and increases the productivity of internal teams by freeing them from reactive firefighting.

From a carbon reduction perspective, energy management systems provide the data foundation required to measure and verify progress toward Net Zero targets. Accurate, granular reporting strengthens ESG credentials and supports transparent communication with stakeholders, regulators and customers. EMS platforms also support integration with renewables and load-shifting strategies that further reduce reliance on carbon-intensive energy sources. Research shows that effective energy management contributes significantly to sustainability outcomes by identifying inefficiencies and enabling targeted interventions.

Collectively, these benefits illustrate that energy management is not merely a technical upgrade; it is a performance strategy that aligns cost control with carbon reduction and operational resilience.

Bute Hall, the grand ceremonial heart of Glasgow University, have managed to cut operational costs by 85% and reduce CO₂ emissions by 82% through smart energy management, which particularly addressed their ventilation system which was operating on an inefficient fixed schedule.

How legislative change is accelerating demand for energy management

While cost control and carbon reduction are powerful internal drivers, external regulatory pressure is increasingly shaping how organisations approach energy performance in commercial buildings.

Across the UK and Europe, a tightening framework of energy and carbon legislation is placing greater responsibility on building owners and occupiers to measure, manage and improve energy performance. For many organisations, future compliance will not be achievable without improved data visibility, structured monitoring and proactive optimisation. These are all capabilities that modern BMS and EMS provide.

In this context, energy management is no longer purely a financial, sustainability or operational enhancement. It is becoming a compliance requirement.

The direction of travel is clear: greater transparency, measurable reductions and stronger accountability.

Below, we examine the key regulatory developments shaping the commercial property landscape in the UK and what they mean in practical terms.

ESOS phase 4 and beyond

The Energy Savings Opportunity Scheme (ESOS) is entering a more demanding phase. Phase 4 significantly strengthens requirements around energy data collection, audit quality and action planning. Organisations must now

produce clearer, more structured evidence of energy saving opportunities, and there is increased scrutiny of implementation planning rather than simple compliance reporting.

Future phases are expected to continue tightening expectations, potentially introducing mandatory implementation of identified cost-effective measures. For organisations affected by ESOS, this has several implications.

First, energy data must be accurate, granular and auditable. Manual spreadsheets and fragmented reporting are increasingly insufficient. Second, energy audits must be grounded in robust, high-quality information about building performance. And thirdly, ongoing monitoring becomes essential. It is no longer enough to conduct a periodic review, and instead organisations must demonstrate a structured approach to continuous improvement.

Modern EMS platforms simplify ESOS compliance by consolidating energy data, automating reporting and providing traceable insight into performance trends. Proactive monitoring also ensures that opportunities identified through audits translate into measurable action rather than static reports.

Streamlined Energy and Carbon Reporting (SECR)

SECR requires qualifying organisations to report annual energy use, carbon emissions and energy efficiency actions within their directors'

report. This requirement has elevated energy data from a facilities management concern to a board-level issue. Energy performance is now part of statutory financial and governance disclosures.

Without integrated data systems, organisations risk inaccurate reporting or inconsistent methodologies, exposing themselves to reputational and regulatory risk.

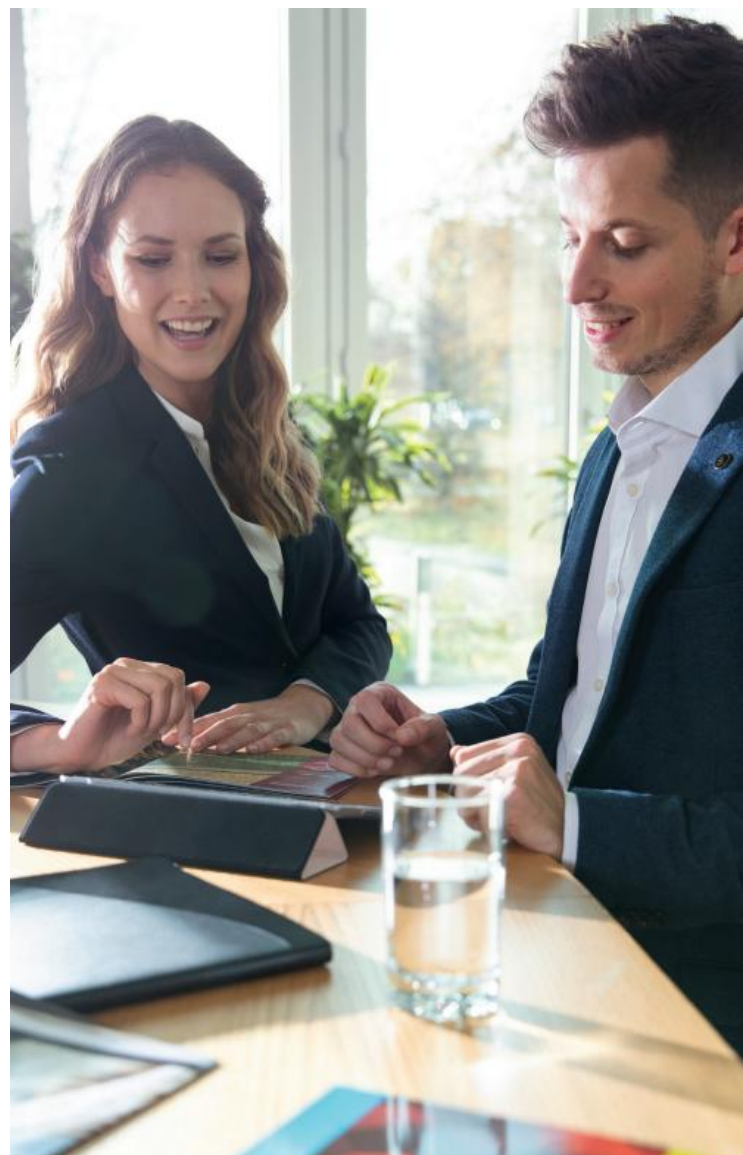
An EMS provides a centralised data source that supports consistent reporting and year-on-year comparison. When integrated with BMS data, organisations gain not just total energy consumption figures, but insight into operational drivers behind those numbers, enabling more meaningful reporting narratives.

EPC ratings and MEES requirements

Energy Performance Certificates (EPCs) and Minimum Energy Efficiency Standards (MEES) are becoming increasingly stringent.

Currently, MEES require commercial properties to achieve a minimum EPC rating of E to be let. However, government proposals signal a tightening trajectory toward higher minimum standards in coming years. As these thresholds increase, landlords and occupiers face material financial risk. Assets that fail to meet minimum standards may become unlettable, creating stranded asset risk within property portfolios.

Improving EPC ratings is not solely about fabric upgrades. Operational performance, including heating, cooling and lighting efficiency, plays a crucial role in real-world energy outcomes. Without systematic monitoring, organisations may only discover performance issues when EPC reassessments occur, which is often too late to implement cost-effective solutions.



Energy Performance of Buildings (EPB) reforms

Reforms to the EPB framework aim to improve transparency and performance accuracy. There is increasing emphasis on actual energy performance rather than modelled estimates. The direction of travel suggests greater alignment between operational data and certification metrics. In practice, this means that buildings will increasingly be assessed not only on design intent, but on actual usage patterns and performance.

For organisations, this reinforces the importance of real-time monitoring and data analytics. If regulatory frameworks move toward performance-based metrics, continuous optimisation becomes a competitive advantage rather than an optional enhancement.

An integrated BMS and EMS platform ensures that organisations understand actual energy behaviour and can respond dynamically rather than retrospectively.

Building regulations and the Net Zero transition

Building regulations are also evolving in line with the UK's Net Zero commitments. New performance standards are placing greater emphasis on operational efficiency, carbon intensity and digital monitoring capability.

In addition, corporate Net Zero targets are increasingly being scrutinised by investors, regulators and customers. Vague commitments are no longer sufficient; organisations are expected to demonstrate credible transition pathways and measurable progress.

Proactive energy management platforms enable organisations to meet these expectations confidently. By embedding monitoring and optimisation into everyday operations, businesses can align regulatory compliance with operational efficiency and sustainability performance.

Legislation is raising the baseline

Collectively, these legislative developments are raising the baseline expectation for energy performance in commercial buildings.

Organisations that invest early in modern BMS and EMS platforms will be better positioned to adapt to tightening requirements. Those that delay may find themselves reacting under time pressure, facing higher retrofit costs and increased compliance risk.

Regulation is not simply a constraint. For forward-thinking organisations it is a catalyst, accelerating digital transformation, operational optimisation and long-term resilience.

The future of smart energy management

The evolution of energy management technology continues to accelerate. Emerging capabilities such as intelligent alerting, load shifting, predictive analytics, wireless sensing and deeper integration with business systems are expanding what is possible within intelligent buildings.

Remote planned preventative maintenance, for example, enables organisations to address issues before they occur, reducing downtime and avoiding energy waste. Integration with customer relationship systems and other enterprise platforms allows organisations to align energy strategies with broader operational

objectives, ensuring energy performance supports business outcomes rather than sitting in isolation.

As buildings become more connected and data flows become richer, energy management systems will increasingly serve not just as reporting tools, but as strategic decision engines capable of anticipating inefficiencies and recommending actions automatically.

This future of intelligent, integrated energy management is not speculative; it is already becoming the standard for organisations that seek economic growth, improved performance and sustainability.



Strategic recommendations

For organisations seeking to close the energy visibility gap and deliver measurable improvements, several strategic steps should be considered.

Begin with a comprehensive audit of the current visibility of energy use across your estate. This involves assessing whether existing systems provide sufficient granularity and whether data can be accessed centrally. Once visibility gaps are identified, organisations should prioritise the integration of disparate data streams and platforms to consolidate insight.

Evaluating data quality and identifying integration gaps between systems, utilities and contextual data such as occupancy and weather information helps build a foundation for more advanced analysis. Transitioning from reactive to proactive monitoring should be a priority, with smart alerts and remote diagnostic capability enabling earlier intervention and less disruption.

Integrating BMS with EMS platforms ensures that operational control is supported by analytical intelligence. Aligning an energy management strategy with economic growth targets and Net Zero commitments strengthens organisational coherency and accountability. Standardising controls and setpoints across sites can reduce variability and waste, while

remote connectivity enhances responsiveness and reduces the need for site visits.

These steps provide a practical and strategic roadmap from reactive control to proactive intelligence.



Conclusion: Closing the energy visibility gap

Ambition for economic growth is widespread, but system adoption to enable this growth remains limited.

With the cost of energy out of a business' control, the importance of energy management systems to allow businesses to become smarter about how much energy they use is amplified.

At the end of the day, the cheapest kWh of energy is the one you do not use.

Understanding energy use is foundational to meaningful cost control and efficiency. Without visibility, performance optimisation remains aspirational rather than operational.

A proactive building management system supported by an intelligent energy management system bridges the gap between ambition and achievement. This integrated approach aligns cost savings with carbon reduction and strengthens operational performance.

Because cost savings and decarbonisation are not competing priorities, they are aligned outcomes. The organisations that will succeed will be those that move beyond control. And towards intelligence.

The background of the image consists of a series of wavy, vertical lines that create a sense of depth and movement. The color palette is primarily red, with a gradient that transitions into a darker purple at the bottom. The lines are more pronounced in the lower half of the image, where they appear to curve and flow towards the bottom right corner. The E.ON logo is positioned in the lower center of the image, rendered in a white, italicized sans-serif font. The logo is composed of the letters 'e', 'o', and 'n', with a dot between the 'e' and the 'o'. The overall composition is dynamic and modern, with a strong emphasis on the company's branding colors and the fluid, organic shapes of the background lines.

e-on