Optimizing Energy Efficiency

Energy Management System ISO 50001

Taking meaningful action towards sustainable impact

> “Energy efficiency could deliver **40%** of the emissions abatement required by the Paris Agreement climate goals[1].”

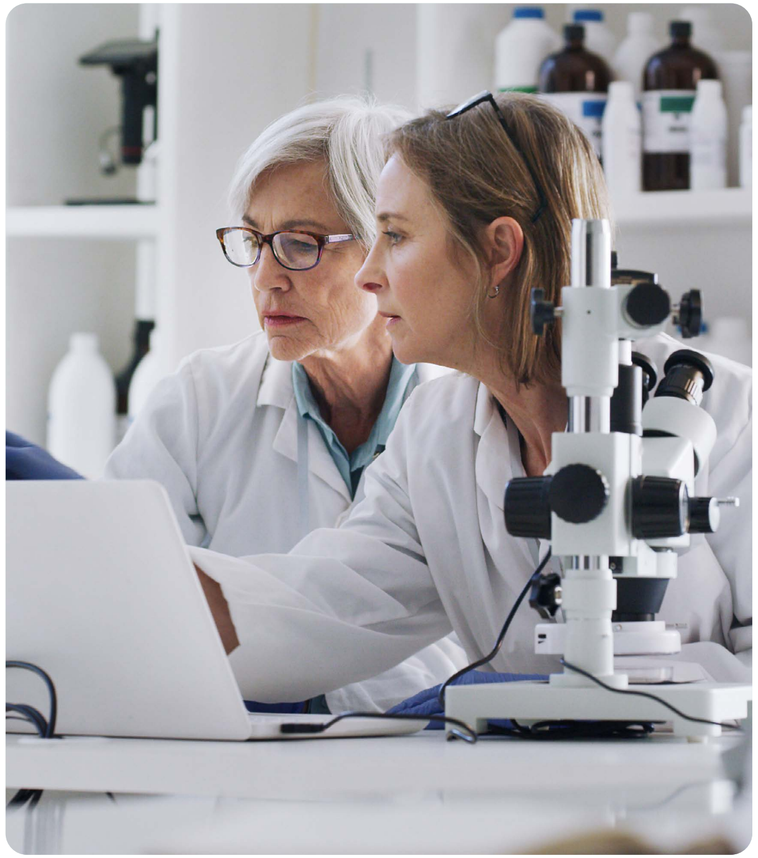
Individuals and organizations across the globe are becoming more aware of their energy consumption, and how this directly impacts their ecological footprint.

Many organizations are taking proactive measures to lower their reliance on fossil fuels and streamline efficiencies by strengthening their energy management processes. This is particularly crucial for industries where energy expenses represent a significant portion of total costs.

To accelerate sustainable progress, leading organizations are implementing an Energy Management System (EnMS) based on the international standard ISO 50001.

ISO 50001 enables organizations to systematically address their energy impact, reducing operational costs and driving progress towards a sustainable future.

By integrating energy management into your Environment, Social and Governance (ESG) frameworks and leveraging an EnMS, you can address not only energy use, but minimize your wider societal and environmental impact.



[1]How Energy Efficiency Will Power Net Zero Climate Goals, IEA, https://www.iea.org/commentaries/how-energy-efficiency-will-power-net-zero-climate-goals, March 2021

Taking meaningful action towards sustainable impact

In this guide, we'll show you how certification to ISO 50001 can strengthen your organization's sustainability, profitability, and long-term success.

We'll also explore:

- The market forces driving the need for an EnMs.
- How an EnMs based on ISO 50001 helps reduce your environmental impact.
- The immediate and long-term benefits certification to ISO 50001 can create for your organization.

"Countries representing over **70%** of the world's energy consumption have introduced new or strengthened efficiency policies since the start of the global energy crisis[2]."

[2]Decade for Action Highlights, IEA, https://www.iea.org/reports/energy-efficiency-the-decade-for-action/decade-for-action-highlights, 2024

What’s driving the need for an EnMS?

There are many factors influencing the need for organizations to make their energy consumption more efficient and sustainable. Here are the key drivers of change that are compelling organizations to adopt a robust EnMS and enhance their energy management protocols.

Regulatory changes

Across the globe, legislation and international frameworks have been introduced to help organizations strengthen the transparency of ESG reporting and improve energy efficiency. For example, The Global Reporting Initiative (GRI), the Task Force on Climate-related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB) have all been introduced as international measures to ensure organizations can meet the evolving expectations of investors, stakeholders, and society.

Technological innovation

Technologies are increasingly being adopted to help manage and optimize energy use. For example, smart energy management systems, IoT, AI, and decentralized energy solutions all enable real-time monitoring. The rise of electric vehicles (EVs) and supporting infrastructure are also reducing emissions from transportation.

Net zero emissions targets

Reducing dependency on fossil fuels and lowering carbon footprints are top priorities for organizations. To achieve ambitious net zero targets set by governments, boards and stakeholders, organizations are adopting renewable energy sources, improving energy efficiency, and investing in carbon capture and storage (CCS) technologies to accelerate progress.

Ongoing social pressures

Organizations are under growing pressure by consumers and stakeholders alike to reduce their carbon footprints and lower rising energy costs. 71% of individuals surveyed agree climate change is the most critical issue facing the world at the present time[3]. This is, in part, driving the demand for renewable energy sources and encouraging organizations to transition to more sustainable energy sources. Alongside this, there is also mounting pressure to ensure equitable access to energy resources to underserved and remote communities in particular.

Energy costs and security

In recent years, many organizations across the globe have seen a significant rise in energy costs. This is due to a wide range of influences from fluctuating supply and demand, geopolitical and economic factors, and slow progress in the clean energy transition. International institutions like the IEA are working to enhance energy security and ensure organizations have reliable, affordable access to all fuels and energy sources. Until significant progress is made in these areas, organizations will need to find ways to maximize efficiencies and identify opportunities for cost-savings.

[3]How Energy Efficiency Will Power Net Zero Climate Goals, IEA, https://www.iea.org/commentaries/how-enegy-efficiency-will-power-net-zero-climate-goals, March 2021

Understanding how ISO 50001 works

Optimizing your organization’s energy performance not only benefits the environment but also enhances stakeholder confidence.

An Energy Management System (EnMS) certified to ISO 50001 allows you to define and reach targeted energy goals, showcasing your dedication to energy efficiency and sustainability.

Components of ISO 50001

Energy policy and legal compliance

Senior management commits to an energy policy that emphasizes improving energy performance, continual improvement, and compliance with legal and other energy-related requirements.

Implementation and operation

Ensure employee competence and establish communication for energy performance. Maintain documentation, control significant energy uses, and integrate energy criteria into design and procurement.

Management review

Top management periodically reviews the EnMS to ensure its suitability, adequacy, and effectiveness. Review inputs include energy performance results and audit findings, leading to decisions on necessary changes and resource allocation.

Planning

Conduct an energy review to analyze current energy use, establish a performance baseline, and identify significant energy uses. Develop Energy Performance Indicators (EnPIs) to track performance, and set objectives and targets with corresponding action plans to achieve them.

Monitoring, measurement and analysis

Establish processes to monitor and measure key operations affecting energy performance and track EnPIs. Periodically evaluate compliance with legal requirements and conduct internal audits to ensure the EnMS conforms to the ISO 50001 standard.

Continual improvement

Implement corrective actions and opportunities to address non-conformities and prevent future occurrences. Continually seek and implement opportunities for improving energy performance and the EnMS’s effectiveness.

Minimizing your environmental impact with an EnMS

ISO 50001 plays an integral role in helping organizations achieve their sustainability goals and mitigate against climate change. Its structured framework enables you to systematically identify, control and reduce your energy impact, as well as identify and manage the risks surrounding your future energy supply.

How ISO 50001 can help reduce emissions

Drives continual improvements

An EnMS centres around an energy policy that commits to continual improvement in energy performance and compliance. By setting clear energy objectives and targets, organizations can better manage consumption, reducing energy wastage, lowering emissions, and decreasing reliance on fossil fuels.

Tracks performance through EnPIs

Within an EnMS, Energy Performance Indicators (EnPIs) are established to measure energy performance and help organizations stay on track towards net zero goals. Monitoring these indicators enables organizations to quantify energy savings and emissions reductions, as well as support data-driven decisions.

Strengthens compliance with regulations

An EnMS helps organizations stay compliant with increasingly stringent energy and emissions regulations. By adhering to these legal requirements, organizations not only avoid penalties but also contribute to broader national and global efforts to combat climate change.

Unlocks cost savings through a cycle of reinvestment

Improving energy efficiency often leads to cost savings which can be reinvested into energy transition and new emissions reduction initiatives, fostering a positive cycle that drives progress towards carbon net zero.

“**74%** agree they are more likely to trust a business’s environmental claims if they can provide evidence verification or certification to validate their claims[4].”

7 opportunities ISO 50001 certification creates

With an ISO 50001 EnMS in place, your organization can unlock a stream of new opportunities and achieve your net zero goals more quickly. Certifying an EnMS to ISO 50001 not only demonstrates your commitment to reducing your carbon footprint, but it also helps you identify and manage the risks surrounding your future energy supply. Other benefits include:

01

Enhanced energy performance

Ensures processes are in place to continually and significantly improve energy efficiency improvements.

02

Cost savings

Optimizing energy use and efficiency measures can help reduce energy costs and operational expenses.

[4]BSI sustainability research carried out in July 2024. Burson surveyed 9,396 adults in the UK, US, France, Germany, the Netherlands, China, Japan, India and Australia.

7 opportunities ISO 50001 certification creates

03
Strengthened compliance

Facilitates compliance with energy-related regulations, reduces the risk of fines and prepares you for future regulatory changes.

04
Sustainability progress

Lowers greenhouse gas emissions and aligns with sustainability goals, contributing to climate change mitigation.

05
Improved brand reputation

Demonstrates verifiable environmental credentials that can increase tender opportunities.

06
Operational efficiencies

Streamlines processes, boosts overall operational efficiency, and engages employees in energy management initiatives.

07
Access to grants

Helps you qualify for financial incentives, grants, and green financing options aimed at promoting energy efficiency.

Accelerate progress towards a sustainable world with ISO 50001

Gap assessment and pre-assessment

Our optional pre-certification assessments can help you identify areas where your EnMS does not meet ISO 50001 requirements. Based on these insights, you can then understand what changes and improvements are needed to achieve certification as well as develop a roadmap and action plan for your organization.

Check your ISO 50001 readiness

Training and qualifications

Our range of ISO 50001 courses and professional qualifications can support you wherever you are on your learning journey. Gain knowledge of the standard and learn the systems, tools, and techniques to understand, implement, and audit against ISO 50001.

Find your ISO 50001 course

Assessment and certification

Enhance energy performance and accelerate net zero progress by certifying to ISO 50001. Upon successful completion of the audit, BSI awards an accredited, internationally recognized certificate, recognizing your organization’s commitment to energy management. We provide ongoing certification support after certification, helping you drive continual improvement to maintain certification and reach net zero.

Discover ISO 50001 certification

Your partner in progress

At BSI, we operate with sustainability principles at our core and are committed to helping all industry sectors achieve net zero by 2050.

We are trusted by our clients to help them overcome their specific energy management challenges. Our range of solutions are designed to help your organization become more resilient against rising energy costs and resource scarcity, whilst embedding sustainability best practice into the heart of your business.

As your trusted partner, we can help your organization improve energy efficiency, use resources efficiently and reach net zero with our range of ISO 50001 solutions.

Let’s shape your organization’s future together

We can help you at every stage of your energy management journey. Speak to our experts today and learn how to accelerate sustainable success with ISO 50001.

Get in touch