



# ISO 50001 Energy Management It's your cost

Your implementation guide

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...making excellence a habit.™

# Background

**ISO 50001** is the internationally recognized standard for successful energy management.

To date the standard has helped organizations from all sectors and of all sizes put in place structured management frameworks to better understand their baseline energy use and establish targets, plans and performance measures to reduce energy consumption. And many have made substantial cost savings as a result.

This guide will help you understand how ISO 50001 can help enhance both the sustainability and performance of **YOUR** business, as well as improve your corporate reputation by demonstrating your commitment to best practice.

BSI can support you all the way along this journey - through training, guidance, independent assessment and software solutions.

We can help you secure a more energy efficient and profitable future using ISO 50001 – and with BSI your journey starts here.



# Reaping the benefits of energy management

Global threats of energy shortages, rising fuel costs and increasing legislation remain critical factors that businesses need to consider in their daily operations.

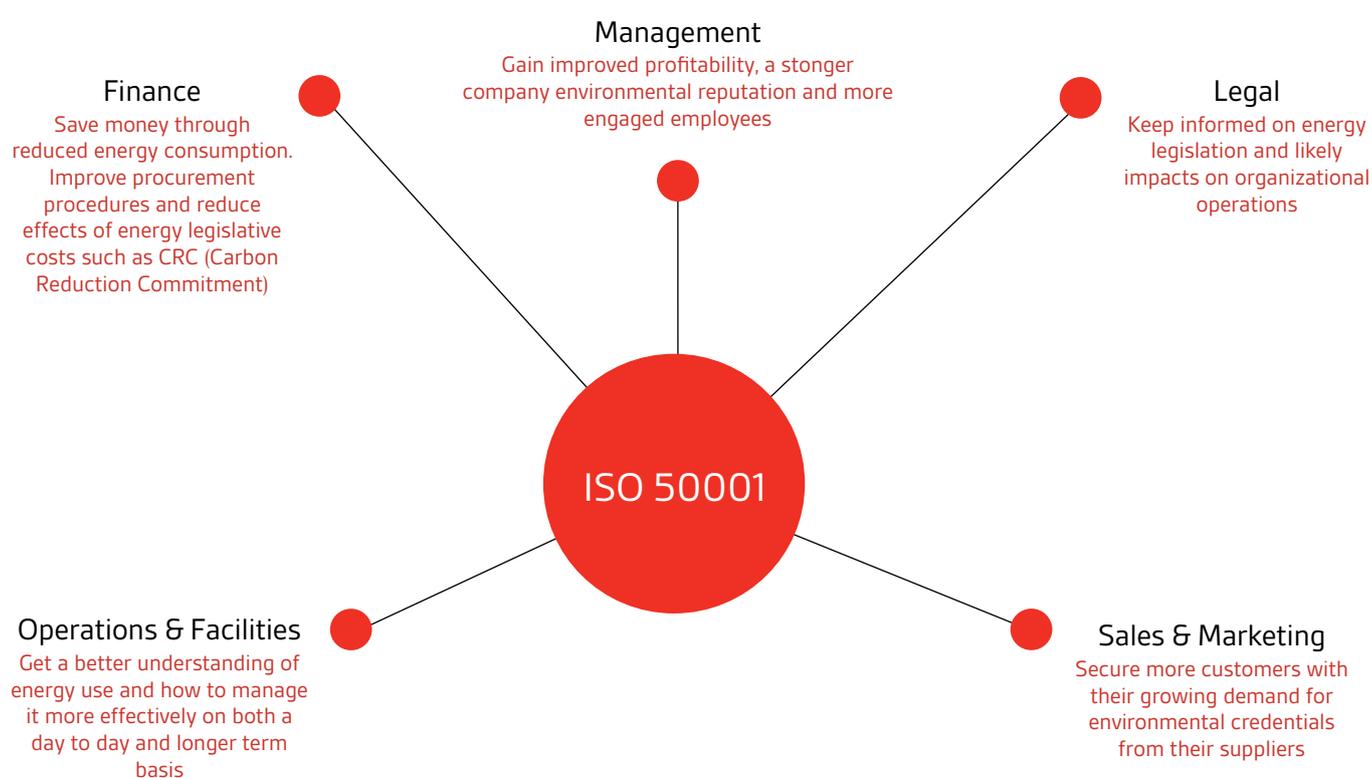
Using a management system approach can help your business address these issues.

A management system is simply a structured framework to help you manage your people, processes and resources and in the case of ISO 50001, your energy.

For example your energy management objectives may include: cutting costs, using resources more efficiently, or ensuring regulatory compliance.

Whatever your focus, this guide will help you understand that you can use ISO 50001 to establish an energy management system which is both flexible and scalable to your business and one that will be able to evolve to meet the specific needs of your organization.

## Benefits which BSI clients have experienced as a result of implementing an ISO 50001 energy management system:



Understanding and communicating the benefits above will help you structure your processes and secure commitment and support from your organization - these are critical factors for ensuring the success of your energy management system.

# Getting started with ISO 50001

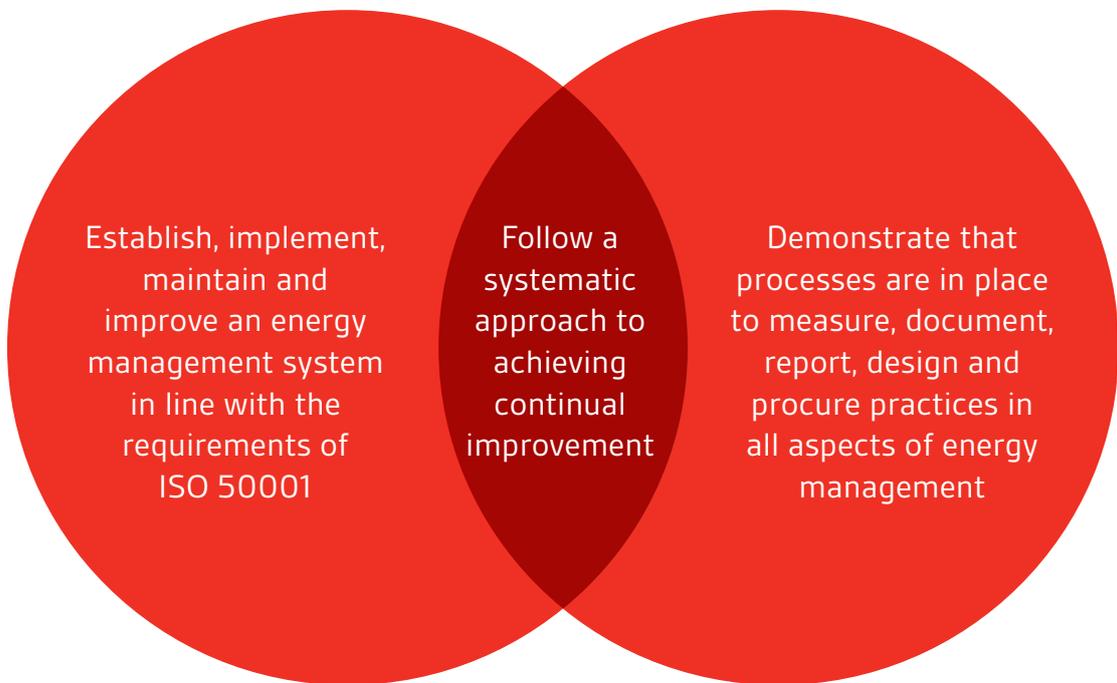
**ISO 50001** is applicable to any organization regardless of size, sector or geographical location. While the standard sets out a best practice framework for energy management, it is written in a way which gives you the flexibility to adapt it to meet your individual business objectives.

Essentially ISO 50001 requires you to demonstrate that you take a systematic approach to improving the management of energy. Once you have put processes and procedures in place to achieve this, the standard then asks you to review and improve your system to ensure on-going best practice and a commitment to continual improvement.

Purchasing a copy of the standard is your first step. Then simply follow the steps in this guide to help you meet the core requirements of ISO 50001.

Learn more about the standards and guides available from BSI [bsigroup.com/shop](https://bsigroup.com/shop)

The principal requirements of the standard are illustrated below:



The next few pages of the guide will take you through more specific requirements of ISO 50001 using the Plan-Do-Check-Act (PDCA) methodology.

# Understanding the principles of continual improvement

The Plan-Do-Check-Act (PDCA) cycle is the operating principle of all ISO management system standards, including ISO 50001.

By following this cycle, you can effectively manage and continually improve your organization's effectiveness.

Whether you are the managing director setting the direction of the business, or an individual focusing on a specific task, the PDCA cycle is very useful in achieving continuous improvement.

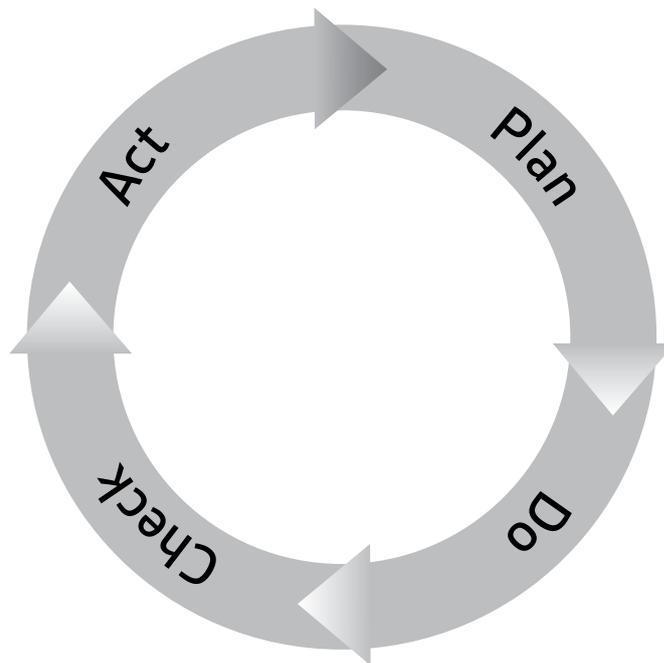
## The four phases in the Plan-Do-Check-Act Cycle involve:

### Act

Correct and improve your plans to meet and exceed your planned results

### Check

Measure and monitor your actual results against your planned objectives



### Plan

Establish objectives and draft your plans (analyse your organization's current systems, establish overall objectives, set interim targets for review and develop plans to achieve them)

### Do

Implement your plans within a structured management framework



"Sheffield Hallam University has already achieved many of the big win energy savings so needed to improve its processes. The framework of ISO 50001 has provided us with a tool to deliver this which allows us to maximize potential opportunities and implement changes to operations and behaviours."

**Gillian Wright,**  
Energy Carbon Manager, Sheffield Hallam University

# Plan – defining your policy, objectives and targets

## Management responsibility

Getting commitment from your top level management and communicating this to the wider organization is critical for the success of your organization's energy management system. Ensure a management representative is appointed with the specific responsibility for overseeing the project and ensuring appropriate resources.

## Energy policy

Next your business will need to agree an energy policy which states the organization's commitment to achieving energy performance improvement. This should be appropriate to the nature and scale of your energy use and consumption. Remember to include a commitment to continual improvement in energy performance, take into consideration compliance with applicable legal requirements and create a framework for setting and reviewing energy objectives and targets.

## Energy planning

ISO 50001 requests that you show evidence that you have conducted and documented an energy planning process which will encourage improvements in energy performance.

## Legal and other requirements

There is a requirement at this point for you to prove that your business regularly identifies, accesses and reviews all applicable legislation and external requirements related to energy use, consumption and efficiency.

## Energy review

Develop, document and maintain an energy review – for example consider energy sources, consumption, facilities and people that affect energy use. Then identify, prioritize and record how you intend to improve your energy performance based on those factors.

## Energy baseline

Make sure you establish an energy baseline using the information from the energy review – this will help you monitor your progress and see improvements over a suitable data period.

## Energy performance indicators

These must be identified in order to provide credible performance data which is regularly reviewed and updated as part of your energy management system.

## Energy objectives, targets and action plans

Set these for relevant functions, levels, processes or facilities within your organization and make sure that they are consistent with your energy policy. Remember, it's important to review and update these plans at defined intervals.

BSI has a range of training courses to support you on your journey. Call us on **+65 6270 0777** or visit [bsigroup.sg/training](https://bsigroup.sg/training)





## Do – implementing and living your management system

You now have the commitment and direction from management and the necessary resources to do the job. Now it's time to put your plan into action.

### Competence, training and awareness

Make sure that your employees understand how to meet the requirements of your energy policy and know how they can mitigate impacts on energy use. Training is essential therefore keep records of training in preparation for your review.

### Communication

You will need to establish a robust internal communication system and have a defined process for receiving, documenting and responding to external parties. Give the users of the system the ability to suggest amendments or improvements via an agreed internal process.

### Documentation and control

Take a look at ISO 50001 which specifies the essential documentation and records which you need to hold, and how these should be controlled and updated.

### Operational control

Plan operations and maintenance activities involving significant energy use under specified conditions and communicate these controls to anyone working for or on behalf of the organization.

### Design

If you are considering any new facilities, equipment, systems or processes then you must bear in mind how these will impact your energy performance.

### Procurement of energy services, products, equipment and energy

When it comes to purchasing, ensure that you define and document energy purchasing specifications and inform your suppliers that procurement is partly evaluated on the basis of energy performance.

Consider using BSI's Entropy™ Software to manage your system.  
Call us on +65 6270 0777 or visit [bsigroup.sg/entropy](https://bsigroup.sg/entropy)

# Check and Act – measurement review and improvement

Your energy management system is a living framework which needs to be reviewed on a regular basis. Make sure you continue to revisit your energy policy and management objectives to ensure your system remains valuable and relevant to your changing business.

## Monitoring and measurement

As part of the certification process you will be assessed to ensure that any operations with a significant effect on energy use are measured, monitored and analysed at planned intervals so check you have evidence to show that you are doing this!

## Evaluation of compliance

Meeting and keeping abreast of legal requirements is an essential requirement of ISO 50001, as is the evaluation and documentation of your organization's performance against these criteria. Ensure you understand and are up-to-date with any regulation relevant to your business.

## Internal audit

You will need to conduct internal audits on a regular basis to ensure the integrity of your management system.

## Non-conformities, correction, corrective and preventative action

It will be necessary to show that you have procedures in place to identify, investigate, evaluate, record and review both corrective and preventative actions in line with the severity of the issue, should a nonconformity arise.

## Control of records

Take care with your records. Ensure you are able to identify, store, protect, retrieve, retain and dispose of records in accordance with the standard and that they remain legible.

## Management review

Management reviews should be scheduled and recorded in order to identify successes, opportunities for improvement and changes that are needed to ensure the system delivers continual improvements to your business.

Consider an optional gap-analysis to help you identify any weaknesses or omissions prior to formal assessment. Call us on **+65 6270 0777**



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## tips on making ISO 50001 work for you

- 1 Top management commitment is vital for the system to be introduced successfully. Make sure senior managers are actively responsible, involved, approve resources and agree the key processes of the business with regard to the system.
- 2 Establish a competent and knowledgeable implementation team to deliver best results, sharing roles and responsibilities.
- 3 Review systems, policies, procedures and processes you have in place at the moment. Then compare those with what ISO 50001 asks for. You may be surprised how much you already do. The standard will allow you to keep the things that work for you while refining those that don't.
- 4 Make sure you have good internal communication channels and processes within the organization. Your employees need to be involved and kept informed of what's going on.
- 5 Give some thought to how departments work together. It's important that the people within your organization don't work in isolation but work as a team.
- 6 Clearly lay out a well-communicated plan of activities and timescales. Make sure everybody understands them and their role in achieving them.
- 7 Consider using your IT systems or software such as BSI's Entropy™ Software to manage your system and documentation more efficiently. The nature and complexity of your documentation will depend on the nature and complexity of your organization.
- 8 Use competitions and incentives to encourage input – for example an incentive for the first completed energy management goal. Make the achievement of ISO 50001 engaging and fun. This will increase motivation.
- 9 Train your staff to carry out internal audits of your system. Auditing can help with an individual's development and understanding as well as providing valuable feedback on potential problems and opportunities for improvement.
- 10 And lastly if you feel you are doing something just for the sake of the standard and it doesn't add value to your business – question whether it's necessary.

“Morgan Lovell has always been an environmentally conscious organization. However the ISO 50001 energy management standard provides a credible benchmark against which we can monitor and continually improve our performance going forwards.”

**Sophie Hutchinson**, Sustainability Manager,  
Morgan Lovell

“For those who have a level of experience and are looking to improve and embed good energy management, ISO 50001 could be invaluable, especially for local authorities that can have very bold targets on carbon emissions but have a huge gulf between the aspiration and the practicalities of implementation. We are never content with maintaining the status quo, we are always looking to and being encouraged to improve”

**Paul Kennedy**, Energy Manager, City of London

“Taking a positive proactive approach, incorporating related standards together, will make future energy and environmental management a continuing and progressive part of the university's sustainability. Fundamentally it is the process of ensuring clear auditable records and the consideration of energy consumption in business processes. Once a system is in place maintaining the system is simple with changes only being required if consumption or business changes.”

**Anuj Saush**, Energy and Environmental Manager,  
London Southbank University

# How BSI **supports you** throughout the implementation of ISO 50001

## Speak to someone at BSI to help you understand the process

If you are new to management systems then we know this may seem rather daunting at first. But don't worry - just pick up the phone to speak to one of our people. We can turn jargon into English and put you on the right track for success.

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## Commit to best practice and start making excellence a habit

Once we have received your application, we will identify the best people to assist you on your journey – those that know your industry sector and will clearly understand your specific challenges. We also have some useful self-assessment tools to help you get started.

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## Engage your team and the rest of the organization

Success will depend on a team effort so get the backing of your organization by helping them understand how they can contribute to the system. Consider whether people have the necessary skills and if not equip them accordingly. BSI offers a number of courses, workshops and online seminars to help you plug this knowledge gap.

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## Gain better management control with easy reporting

ISO 50001 requires that you hold and make documents and information available. You can make life easier by using BSI's web-based business improvement software which allows you to track and report all of your key metrics in real-time.

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## Get ahead with pre-assessment and identify potential loopholes

Many BSI customers like to get reassurance that they are on the right track before committing to the official stage 1 assessment. At your discretion BSI will carry out an optional 'gap-analysis' or pre-assessment visit to help you identify any weaknesses or omissions prior to formal assessment.

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## Celebrate the achievement of your official ISO 50001 certificate

BSI will assess your energy management system in two stages. Our 'Stage 1' visit will involve the review of the system against the requirements of the standard. 'Stage 2' is simply a follow-up to check that you have corrected and progressed any issues raised in the first stage. Now is the time to celebrate your success.

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## Use your certificate to promote your business

Once certified you will be able to make your own mark by displaying the BSI Assurance Mark. It's a valuable marketing tool that you can use to promote your organization; differentiate you from your competitors and win new business.

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## Help for continuous improvement

BSI's support extends far beyond the issue of a certificate. Your certificate is valid for three years, however our team will continue to work with you to ensure that your business remains compliant and you strive for continual improvement. Work with us to find out more about BSI's Entropy™ Software which can help you manage your systems.

## We know ISO 50001; BSI shaped the original standard.

BSI...

- Shaped the original standard that is now ISO 50001 and continues to lead the development of related standards
- Has the most highly trained and knowledgeable assessors
- Offers the widest range of support solutions in the market place
- Is the number one certification body in the UK, USA and Korea
- Looks after more than 70,000 global clients
- Has an unrivalled International reputation for excellence

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