

Best practice in energy, cost and carbon reduction

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What is a standard?

An agreed, repeatable way of doing something

A collective work written by experts and interested parties

A summary of good and best practice

Designed for voluntary use



Why use standards?

Saves you time and money – why reinvent the wheel?

Gives confidence to stakeholders

Opens up international markets and opportunities for growth

More efficient processes and easier to make changes

Staff or more aware of what they should be doing and are more likely to comply

Faster response and recovery – less impact from incidents

Data upon which important decisions are made is more robust

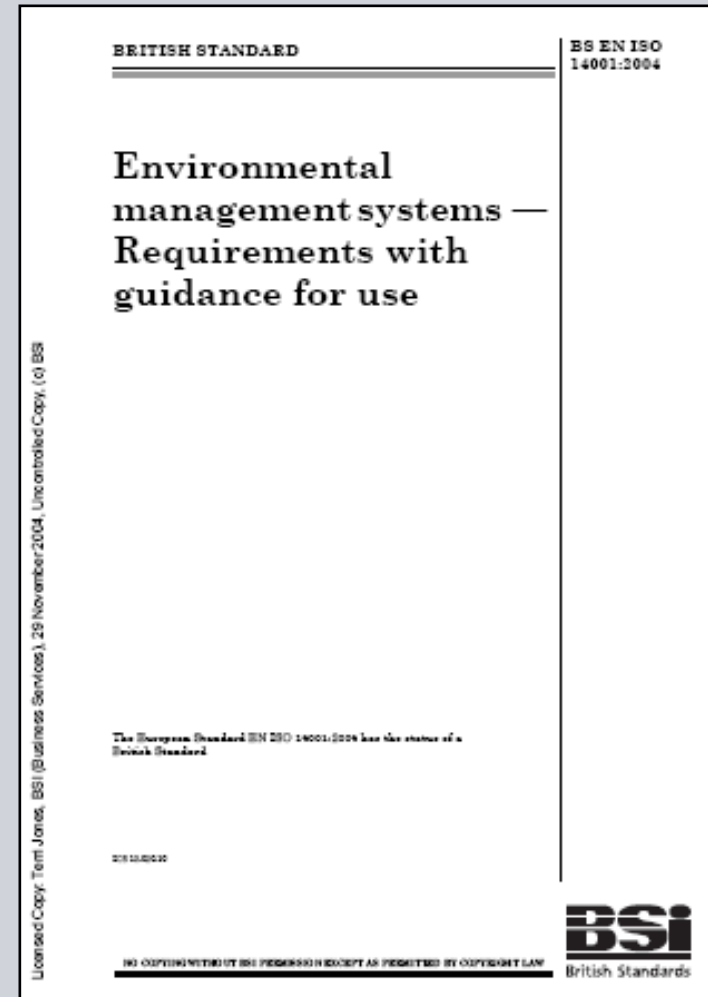
The standards solution – ISO 14001

An international standard for environmental management

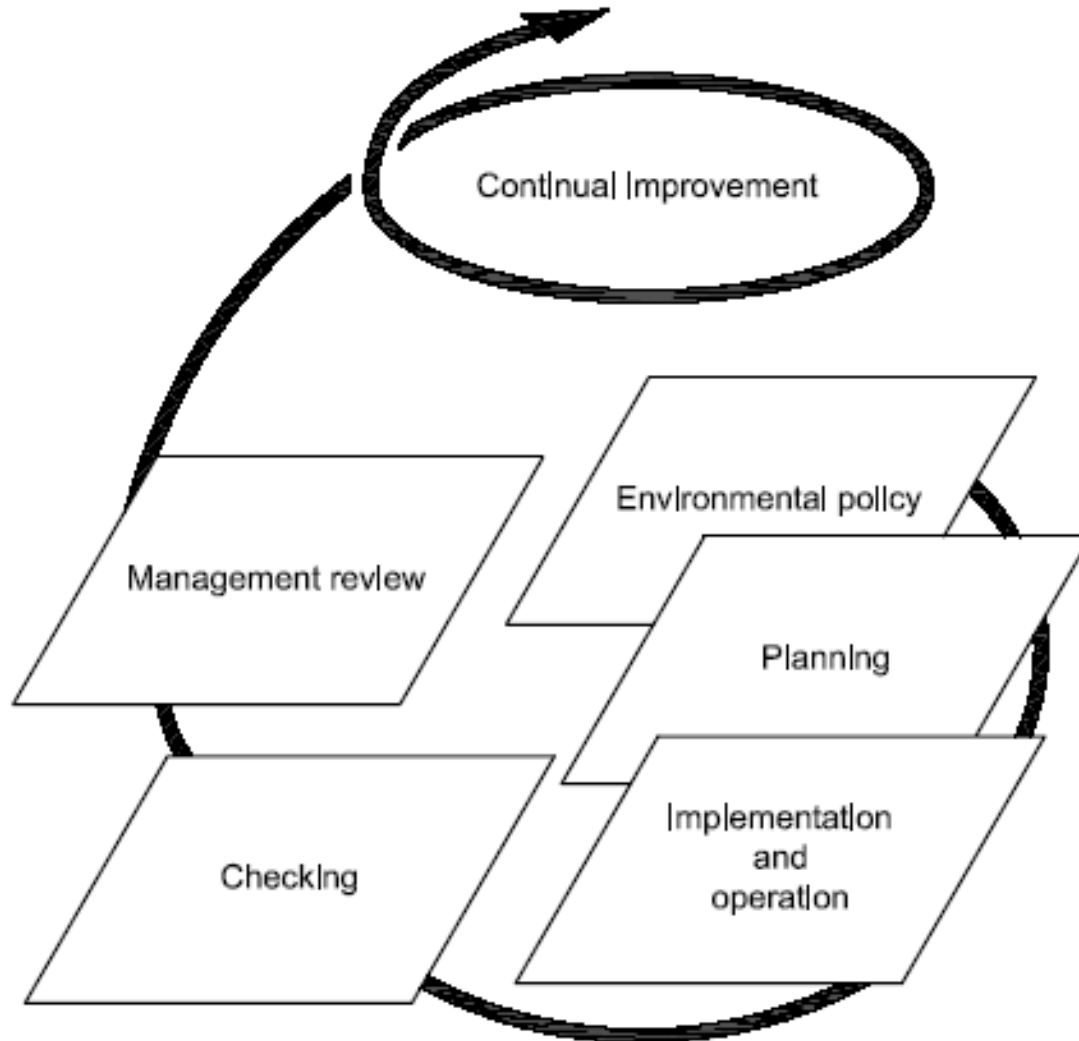
Enables an organisation to Identify, manage and minimise all its environmental impacts including:

- Use of natural resources
- Emissions to air, land and water

Can be used for voluntary third party assessment and registration of an organisation's EMS



The ISO 14001 approach



The standards solution – EN 16001

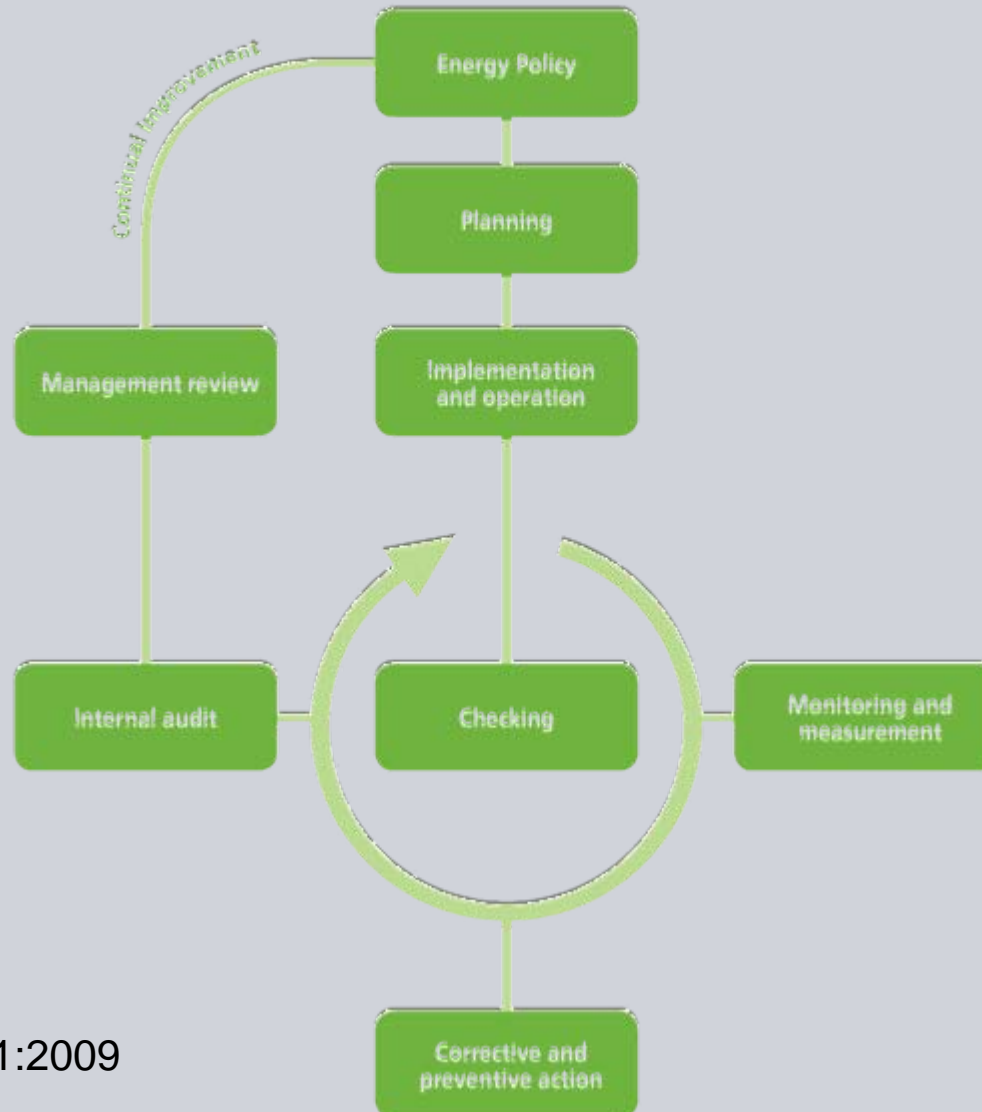
Developed by the European Commission
Builds upon and harmonises existing
national standards and initiatives within
Europe

- SS 62 77 50:2003, Swedish Standards
- DS 2403:2001, Danish Standards
- IS 393:2005, National Standards
Authority of Ireland
- EnMS Specifications in Germany and
The Netherlands

Adopted as the UK National standard –
BS EN 16001:2009



The BS EN 16001 approach



Source: EN 16001:2009

Features & benefits of BS EN 16001

Feature	Benefit
Defined energy policy, objectives and targets	Top management engagement. Direction and focus. Energy management is embedded into organisation
Systematic identification of energy aspects and impacts	Nothing is left out. Focus on those aspects that have the greatest potential for savings
Defined processes and procedures	Process mapping leading to more efficient processes. Consistency in implementation.
Defined and communicated roles and responsibilities	Staff are trained, competent, and aware of their roles and responsibilities and are more likely to be engaged and comply

Features & benefits of BS EN 16001

Feature	Benefit
Operational controls are put in place	Risk of situations that could lead to deviations in energy consumption is minimised
Monitoring and measuring of energy consumption. Relationship between energy consumption and factors is established	Energy consumption can be predicted. Hidden waste and deviations from the norm can be spotted and acted upon. Robust information is gathered for decision making.
Regular reviews of performance is conducted by top management	Trends can be spotted. Areas of weakness and opportunities for improvement can be identified and acted upon. Focus of top management on continual improvement is maintained



Morgan Lovell

“Using BS EN 16001 has helped to reduce our energy bills in the head office by 30% and meet requirements under the CRC Energy Efficiency Scheme.”

ISO 14001 vs. BS EN 16001



Environment management system focuses on:

- Environment protection
- Prevention of pollution
- Waste management
- Environmental performance



Energy management system focuses on:

- Energy efficiency
- Energy conservation
- Energy management
- Energy performance

Validating your energy reduction

Kitemark[®] Energy Reduction Verification Scheme

Enables an organisation to independently verify its energy reductions

KM awarded to an organisation that has:

- identified and assessed their significant energy aspects
- demonstrated a 2.5% reduction in CO₂ emissions
- complied with certain clauses of BS EN 16001

Applicable to any organisation based on two different levels (energy bills <£500K & >£500K)

Designed to provide points under the EAM of the CRC



Kitemark ERV vs. BS EN 16001

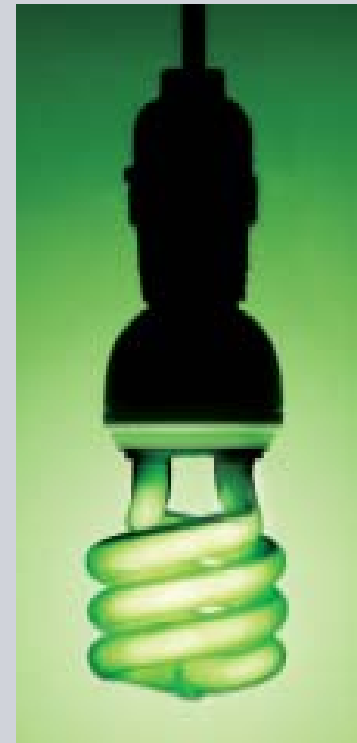
KM ERV verifies reductions in energy use

It does not verify that all elements of an energy management system are in place

BS EN 16001 provides a framework to continue to identify opportunities for improvement and realise those opportunities

As the value of the early action metric diminishes, value of growth and absolute metrics increases - So the value of BS EN 16001 increases

KM ERV provides the stepping stone to BS EN 16001



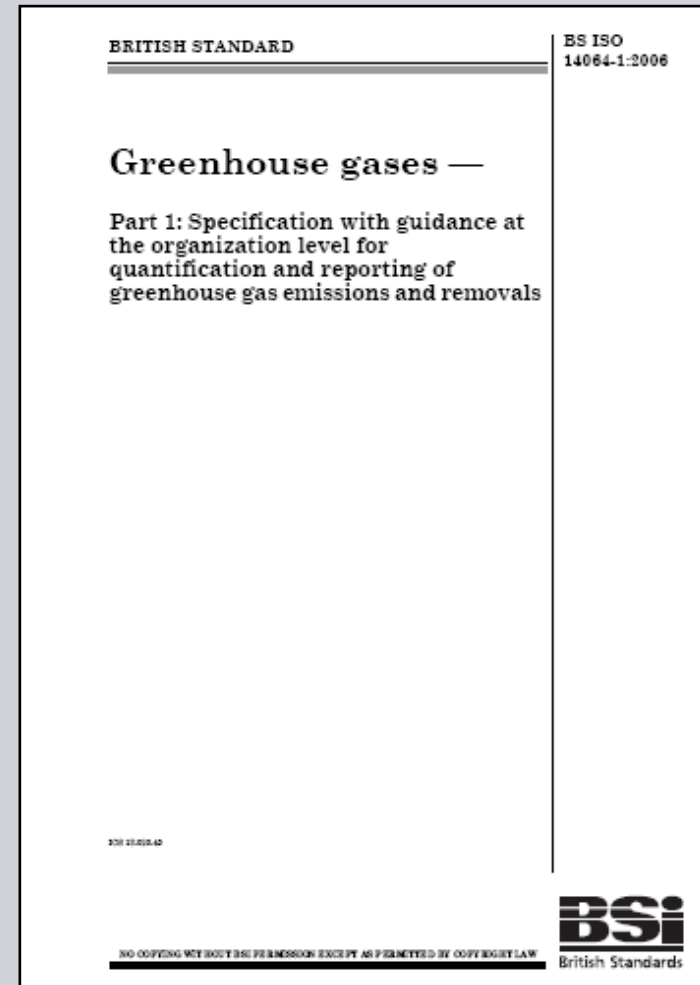
The standards solution - ISO 14064-1

International standard for calculating and reporting carbon emissions at the organisational level

Defines a set of principles that underpin the emissions calculation and reporting:

- Relevance
- Completeness
- Transparency
- Consistency
- Accuracy

Aim – to ensure the report is a true, fair and accurate reflection of the organisation’s carbon footprint



Features & benefits of ISO 14064-1

Feature

Benefit

Organisational and operational boundaries are defined

Clarity on what is included and excluded from the footprint and what data needs to be gathered. Ensures footprint is complete.

Procedures defining the methodology of collecting and converting data are defined

Ensures accuracy of data collection and conversion for year on year comparisons. Ensures transparency and repeatability of calculations.

Specific requirements on what should be reported

Ensures openness of reporting, adding credibility and integrity

The standards solution – PAS 2050

Publicly Available Specification for calculating and reporting carbon emissions of products, goods and services

Defines a set of principles that underpin the emissions calculation and reporting:

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Aim – to ensure the report is a true, fair and accurate reflection of the organisation’s carbon footprint

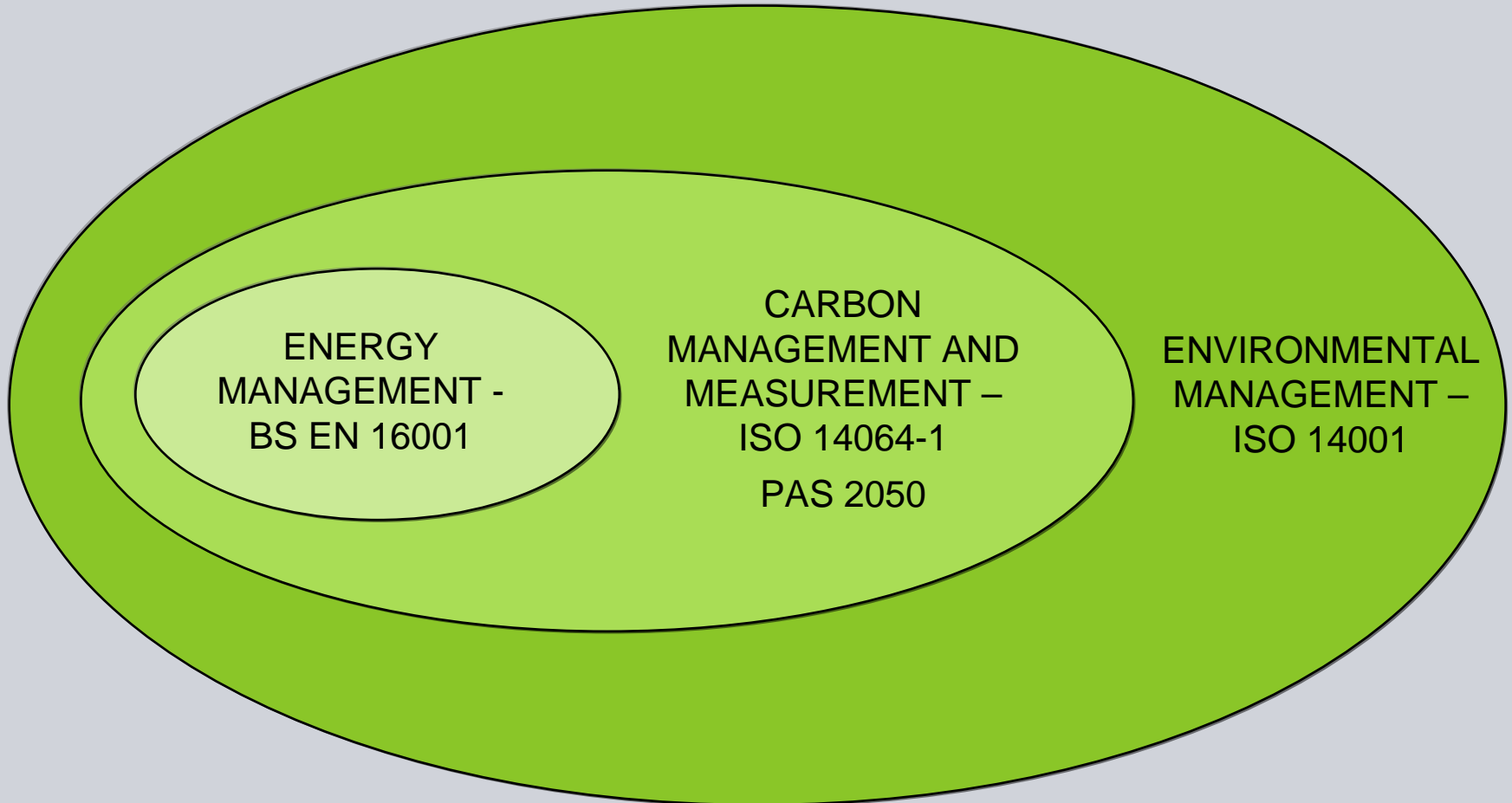
PUBLICLY AVAILABLE SPECIFICATION

PAS 2050:2008

Specification for the assessment of the life cycle greenhouse gas emissions of goods and services

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Summary



Questions?

SIEMENS



Thank You

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