

“How to cope with a 54% rise in energy prices”

Source: DECC Website

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Why We Need Energy Management

- Demand for energy, in all its forms, is rising (PRICE)
- Supplies of key fuels - notably oil and gas - show signs of decline (PRICE)
- The Earth's population continues to rise, with the majority of its six billion people hankering after a richer lifestyle - which means a greater consumption of energy
- Governments are focussing on Carbon Taxation as one solution

Carbon Taxation – Why Take Action?



Cost –

reduce the cost of your energy and your carbon taxation liability

Regulation –

increase your compliance with ever changing legislation



Reputation –

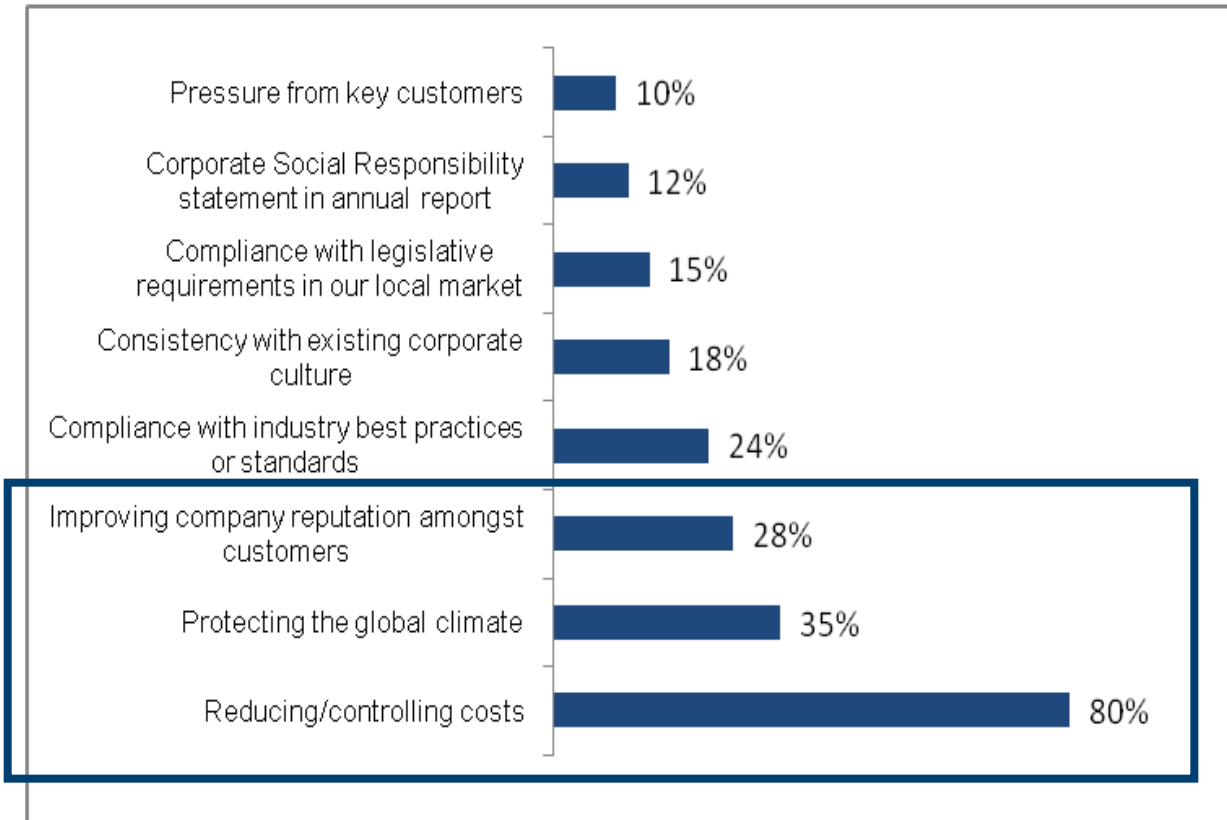
enhance your reputation with customers, suppliers, stakeholders and your staff

Energy Management

The Benefits & Business Case

- Cost savings straight to the bottom line - fast ROI
- Carbon trading fluctuations - risk or opportunity?
- Legislative compliance - ever changing horizon
- Reputational enhancement - the customer expects!
- Broader sustainability awareness of key stakeholders

Why Introduce Energy Management?



Reduce Costs = 80%

Global Climate = 35%

Enhance Reputation = 28%

Sample details:

50 interviews including:

- 33 organizations which complied with or were certified to 14001.
- A range of small (<15 employees) and large organizations (large multi-national, household names)
- 4 energy management professionals

Benefits – Early Adopters

“Energy Management is business critical for cost reasons but also because of the organization, of who we are. There are political and economic drivers.”

“Last year we ended up with £2 million in energy costs that we hadn't forecasted. We have turnover of something like £700 million and energy is something like £10 million. It's not a huge proportion but it's one we can do something about. You can't reduce staff costs, well you could, you could make them redundant, but it's easy to reduce your energy costs.”

Case Studies – Early Adopters



- Financial savings of £200,000 over two years
- Tangible reduction in energy consumption
- Recognition as a seriously sustainable company, operating to best practice
- Creation of a formalised energy policy and objectives



Case Studies – Early Adopters

First ISO 50001 Accreditation in Japan

- Identified plants consuming large amounts of energy and prioritized energy efficiency improvement efforts by conducting energy reviews
- Reduced financial cost by utilizing the no-interest funding scheme managed by Ministry of the Environment (Japan)

 **株式会社 山崎砂利商店**

*Soil Environment Business Department,
Yamazaki Jari Shoten*



Case Studies – Early Adopters



- Initial implementation changed year one energy reduction target from 10% to 22%, in spite of 32% increase in production
- The brand's reputation was enhanced locally and internationally

Case Studies – Early Adopters

“In the current business climate, there is a strong push on costs; and working with BS EN 16001/50001 will very much support not only the reduction of energy use, but the reduction of costs as well.”

Ian Bloxham, SKF's Industrial Division Manufacturing Sustainability Manager,



BSI's Global Reach – Early Adopters

BSI led the way with the introduction of BS EN 16001 – the ***World's first*** Energy Management Standard.

In 2011 we have:

- 275+ Registered Sites Globally
- 20 Countries

And have delivered training in

- 25 Countries



International Development of ISO 50001

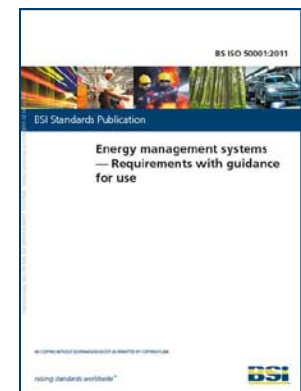
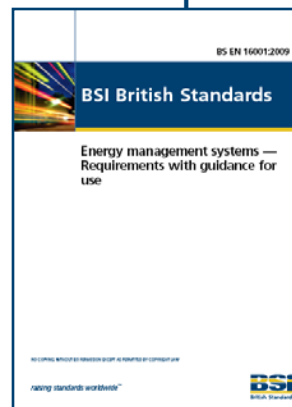
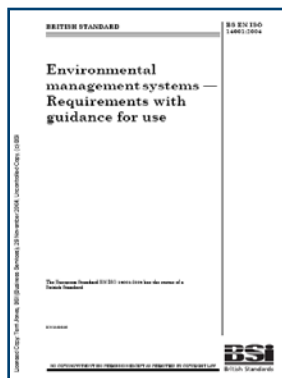
In **1992**, the first Earth Summit was held in Rio-de-Janeiro which served to generate a global commitment to the environment

In the same year BSI published the *world's first* environmental management systems standard, **BS 7750**

This supplied the template for the development of the **ISO 14000** series in **1996**

Environmental Management was expanded into Energy Management with the publication of **BS EN 16001** in **2009**

ISO 50001 – the International Standard was published in **June 2011**



So what can you do?

Energy Management Systems and Standards

“Inenco and NIFES helping you put the pieces
together”



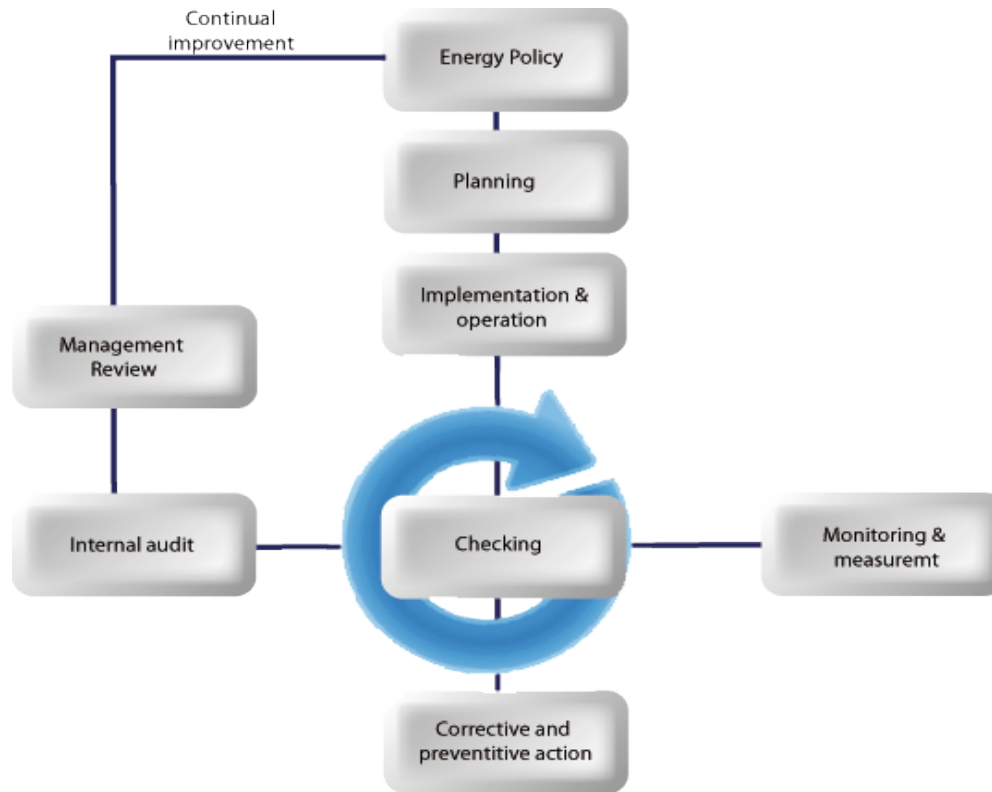
Energy Management **System** (EnMS)

“Set of interrelated or interacting elements of an organisation to establish energy policy and objectives and to achieve those objectives.”



Energy Management System Model

Plan, Do, Check, Act



A good EnMS

- Allows for systems and processes to be established
- Introduces a continual improvement process
- Creates energy monitoring/analysis activities
- Formalises energy policy and objectives
- Improves drive towards innovation
- Saves your organisation money
- Documents how you manage energy
- Allows senior management to oversee practices.

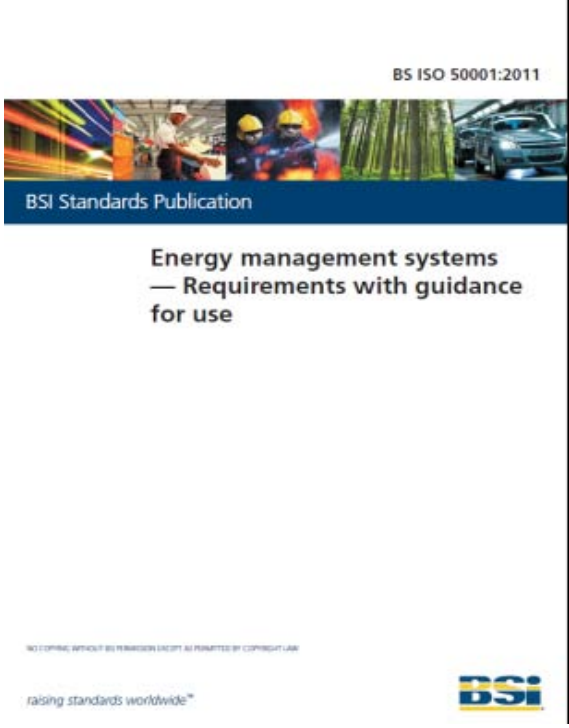
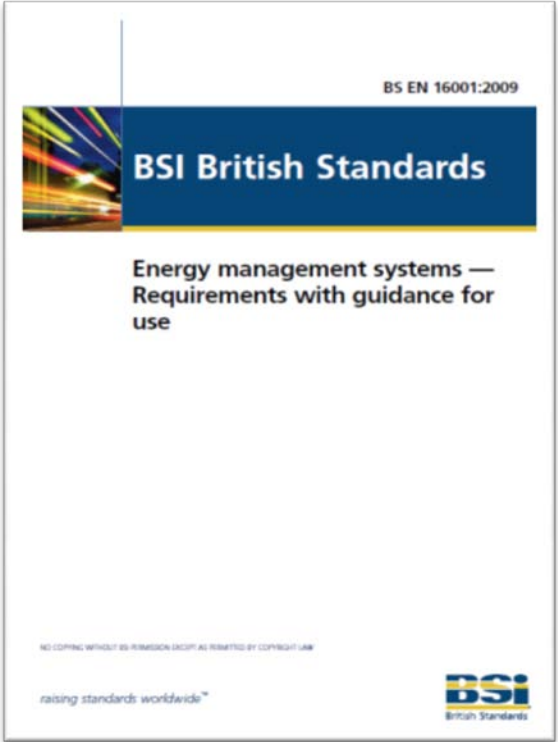


What an EnMS is not

- Not a Building Energy Management System (BEMS)
- Not a prescriptive set of rules
- Not a recipe for managing energy
- Not a Carbon Management Plan
- Not concerned with water or other utilities
- Not concerned with energy procurement
- Not a solution but a management approach/system to deliver solutions.

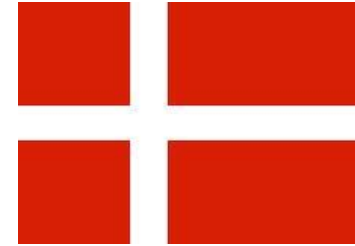


Energy Management System Standards



Some Energy Management System Standards

- Denmark – DS2403: 2001
- Sweden – SS627750: 2003
- The Netherlands and others
- Ireland – IS393: 2005
- Europe – EN 16001: 2009
- Global – ISO 50001: 2011



EN 16001:2009 Standard



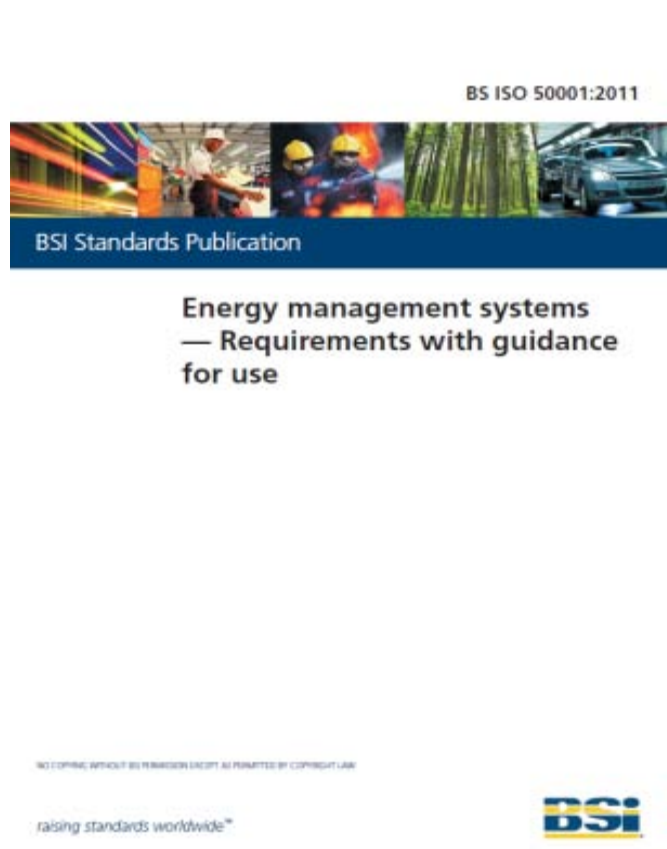
Includes Annex A,
Guidance on the use of
the standard.

Launched in 2009.

Developed by 29 member
countries

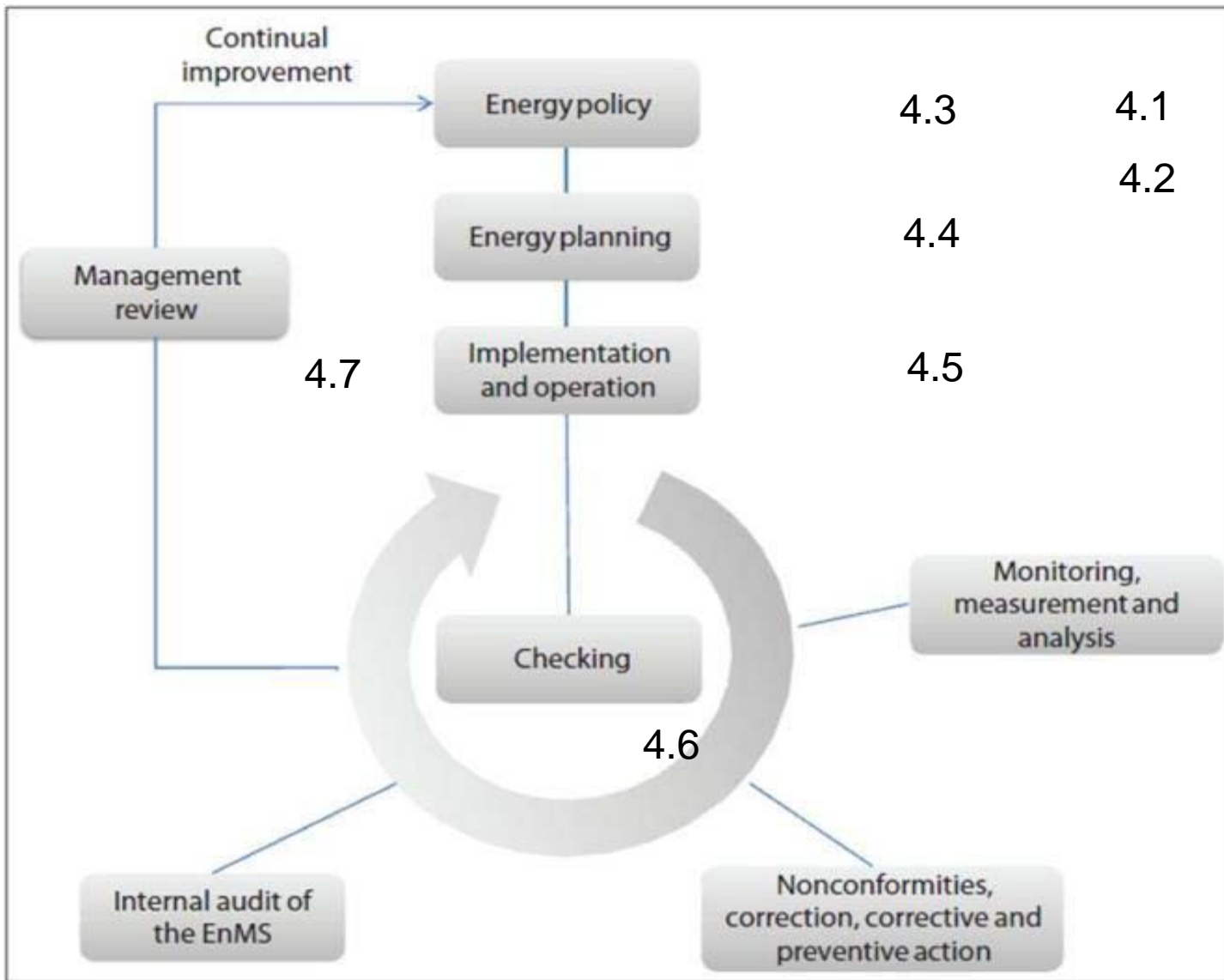


ISO 50001: 2011



- Global Standard
- Developed by 37 countries
- Released 15 June 2011
- Launch December 2011
- Will replace EN 16001





Essence of ISO 50001:2011

4.2 Management Responsibility

- Top Management
- Management Representative

4.3 Energy Policy

4.4 Energy Planning

- Legal/Other Requirements
- Energy Review
- Energy Baseline
- Energy Performance Indicators
- Objectives, Targets, Action Plans



4.5 Implementation and Planning

- Competence, training and awareness
- Communication
- Documentation
- Operational Control
- Design
- Procurement



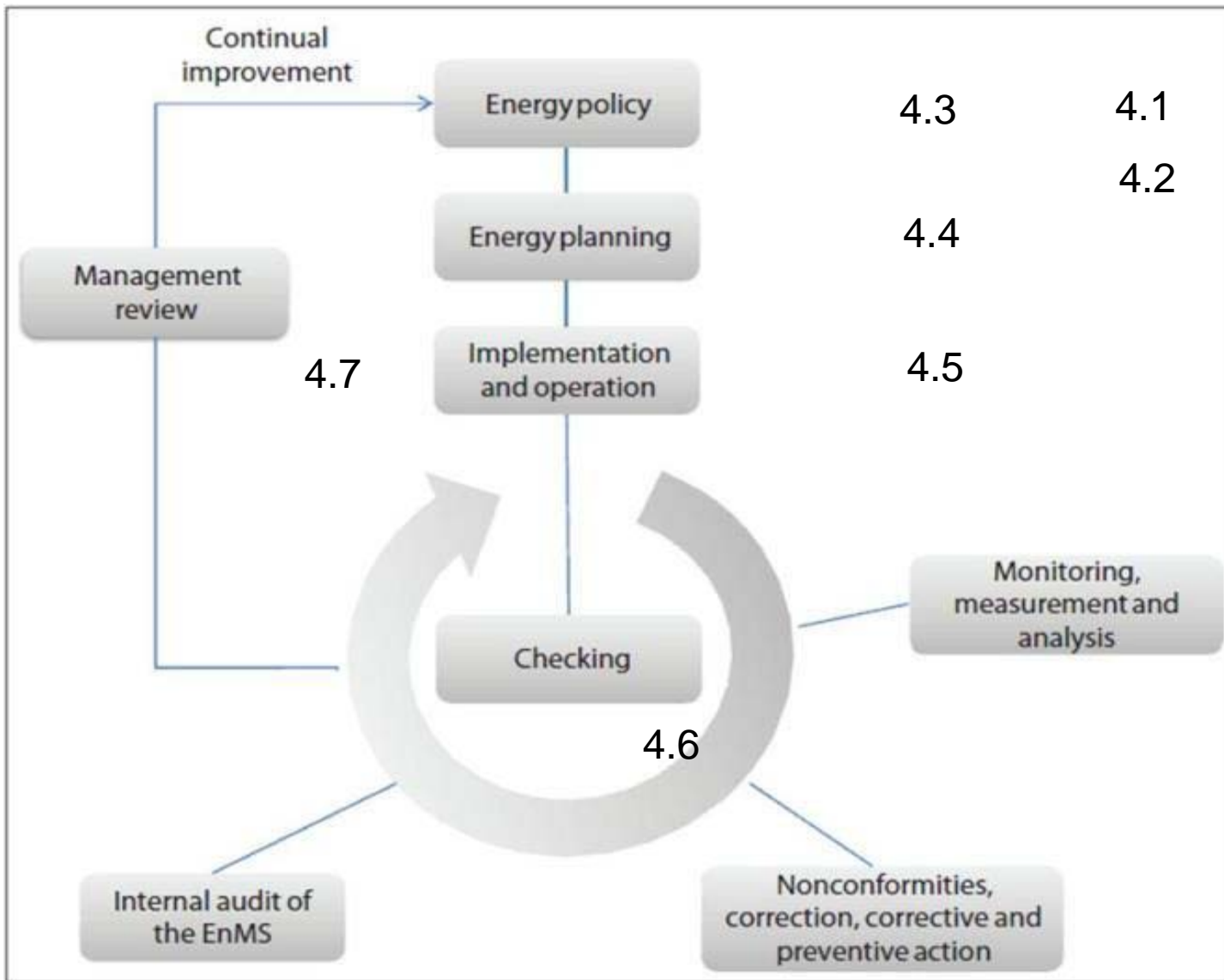
4.6 Checking

- Monitoring, measurement, analysis (energy)
- Evaluation legal requirements
- Internal Audit (System)
- Non-conformities/Corrective Action (System)
- Control of Records (System)

4.7 Management Review

- Input to Review
- Output from Review





Who should implement ISO 50001:2011

- Organisation already accredited to ISO 14001
- Large multi-national manufacturing organisations
- Large commercial organisations
- Some larger public sector bodies
- Organisations wanting a structured approach
- Organisations looking for a badge to gain competitive advantage
- Organisations who will need badge in future tenders
- Organisations under CRC (see next slide)



Early Action Metric - CRC

- Smart Metering/Carbon Trust Standard
- CT Standard is not a Standard but qualifies as EAM under CRC
- BSi Kitemark ERV is based on BS EN 16001
- BSi Kitemark ERV qualifies as an EAM under CRC
- Becomes less significant with time 100%/40%/20% weighting



Kitemark ERV Certification

- KM ERV awarded to an organisation that has:
 - identified and assessed their significant energy aspects
 - complied with certain clauses of BS EN16001
 - demonstrated a 2.5% reduction in CO₂ emissions
- Certificate valid for 24 months from end of compliance period
- Re-verification every two years or more frequent as desired



What does the our support programme deliver



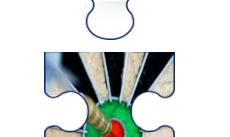
Policy



Energy Review



Legal Obligations



Objectives/ Targets



Roles & Responsibilities



Awareness & Training



Employee Communication



System Documentation / Control



Operational Control



Monitoring & Targeting



Internal Audit

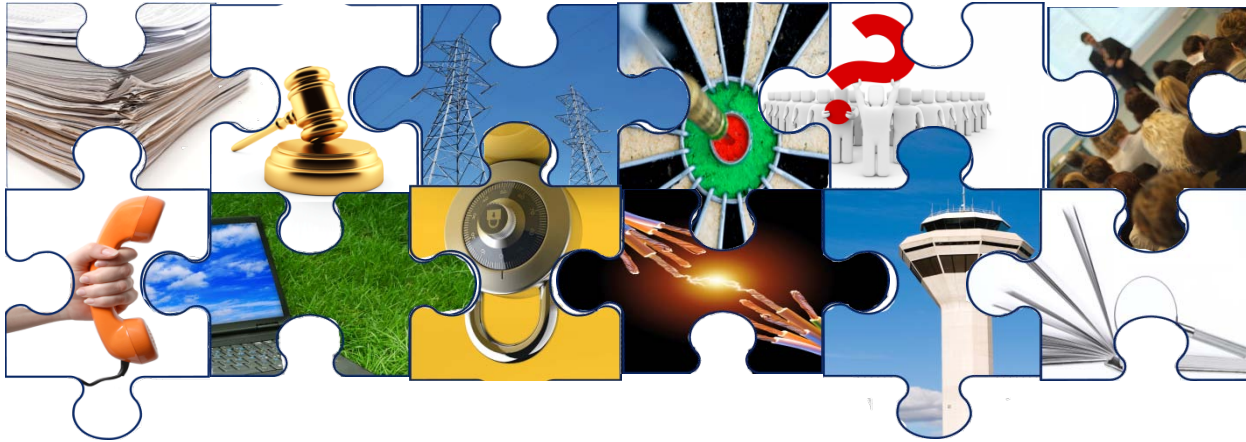
Inenco/NIFES Solution

- GAP Analysis (establish what, when and how)
- Establish level of support to establish an EnMS
- Implementation of the systems and processes
- Training and target setting
- Define how you manage energy
- Fully implemented documentation and audit
- Handover and training to your energy team
- Integrated policies and procedures
- Assistance to achieve ISO 50001:2011



Inenco/NIFES Approach

“Putting the pieces together”



Helping you cope with the rising price of energy



Any questions?



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