

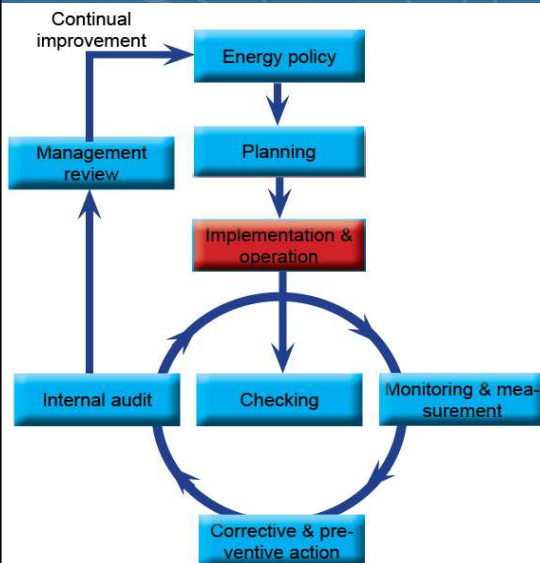


Implementation & Operation

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Towards an International Energy Management Standard – ISO50001

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Implementation & Operation - DO

- Competence, training and awareness
- Documentation
- Operational control (operation and maint)
- Communication
- Design
- Purchasing energy, services and goods



**We have a policy with management support,
resources, strategic direction and committed team
members**

We also have objectives, targets and action plans

**Now, we must implement the day to day control and
continuous improvement of our energy
performance**



Notes

- This is a continuous daily process – not a project
- It needs to be part of day to day habits
- This is the part where energy savings and energy performance improvements are actually made
 - All other parts of the system support this
- If it doesn't save energy, don't do it (in this context)



Outputs from planning = Input

- Identified significant energy using systems
- Significant people
- Baseline
- EnPIs to track improvements and highlight issues
- Critical operating parameters
- Objectives, Targets and Action Plan
- Method to verify the results of the action plan
- Training Plan
- Predicted energy use for the coming period (year)



Awareness

- All persons working on behalf of the organisation shall be aware of:
 - The need for conformity with the policy, procedures and requirements of the EnMS
 - Their roles, responsibility and authority with respect to the EnMS
 - The benefits of improved energy performance
 - The impact of their activities of the achievement of energy objectives and targets
 - Consequences of departure from procedures



Training & Competence

- Staff with a significant impact on energy use need to be competent
 - Education
 - Training
 - Experience
 - Skills
- Training plans are to be implemented and documented
 - Who, what, when and status



- Documentation requirements
 - Paper or electronic
 - Describe the core elements of the EnMS
 - Relevant records need to be available and controlled
- Control of documents
 - Approval prior to use
 - Periodic review and update
 - Revision control
 - Must be legible and identifiable
 - Latest versions only in circulation
- Integrate into existing document control



Operational control

- This is a very critical part of the EnMS
 - Only a small part of ISO/DIS 50001 and others (9 lines)
- Significant energy using equipment operation
 - Operating parameters
 - Operating procedures
 - Logging (electronic and manual)
 - Monitoring of operations and records
- Maintenance of Significant energy using equipment
 - Maintenance procedures and schedules
- Communication of operational controls



Communications

- Outgoing
 - Energy Policy
 - Awareness
 - Emails
 - Posters
 - Screens
 - EnPIs
- Incoming
 - Opportunity to contribute
 - Ideas
 - Suggestions
- External Communications



Design - Projects

- Major opportunity to improve
- Technical Changes
 - Expansion, refurbishment, replacement
 - Facilities, equipment, systems and processes
- Energy Efficient Design
 - Challenge user specification, use, distribution, generation (System optimisation approach)



Energy Efficient Design (EED)



Source: SEAI



UNIQUE FOR EED



ADDRESSES IN OPERATION



Procurement

- Energy Services
 - Consultants, designers, constructors, service companies
- Goods
 - Significant energy users
 - Example: air compressors and motors, e.g. 200kW
 - Example: light bulbs, e.g. 60W or CFL
- Energy
 - Capacity, specification, tariff structure
 - Environmental impact; brown v green
- Procurement policies and processes
- Life Cycle costing (LCC)



Outputs of Imp & Op

- There are many and varied and thus this list is illustrative of what typically would be included
 - Training matrix, training records, CVs of contractors, etc
 - Documentation according to document management system
 - Operational records and logs
 - Maintenance records and service visit reports
 - Communication records
 - Project review methodology (EED)
 - Procurement procedures or processes



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Thank you for your attention

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