

ISO 50001

Energy Management System



MOTIVATION AND BENEFITS

The purpose of this international standard is to enable organizations to establish systems and processes that are necessary to improve energy performance, including energy efficiency, use of energy and energy consumption. The systematic approach is provided by the organization's energy management system.

Based on the energy policy and the definition of the strategic as well as operational objectives, action plans will be established, implemented and reviewed. According to the Austrian Energy Agency the average energy saving potentials are estimated to amount to 10 to 20 per cent.

The standard is based on the common elements of ISO management system standards in order to guarantee a high degree of compatibility, particularly with the ISO 9001 and ISO 14001 standards. It is based upon the continual improvement process, which is known as the PDCA Cycle (Plan-Do-Check-Act), and integrates energy management in the organization's daily business.

ISO 50001 will gain further in importance due to national and international climate protection and energy strategies. Especially as the norm supports the Sustainable Development Goals No. 7 (Affordable and Clean Energy) and No. 13 (Climate Action) issued by the United Nations

OBJECTIVES

ISO 50001 aims to reduce energy consumption, to increase energy efficiency and to decrease greenhouse gas emissions. This results in immediate energy cost reductions and therefore in a boost in profits.

CRITERIA

Among other things, the term energy includes electricity, fuels, steam and vapour, compressed air and renewable energies. The term of use of energy is seen very comprehensively, and comprises e.g. lighting, ventilation, heating, cooling, process heat, transport, processes or production lines.

ISO 50001 follows the High Level Structure (HLS):

- | | |
|--------------------------------|---------------------------|
| 1. Scope | 6. Planning |
| 2. Normative references | 7. Support |
| 3. Terms and definitions | 8. Operation |
| 4. Context of the organization | 9. Performance evaluation |
| 5. Leadership | 10. Improvement |

The essential requirements are

- Energy planning process incl. determination of energy key figures and energy starting bases (those concepts have been further specified by the revision)
- Determination of relevant influencing factors incl. normalization
- Action plans
- Competence of persons who influence energy
- Improvement of the energy management system and energy relevant performance
- Energy efficiency criteria for procurement and facility design
- Integration into business processes

TARGET GROUP

Energy management can be established by companies and organizations irrespective of size or sector. In particular for companies requiring a high amount of energy the standard offers comprehensive systematic requirements and instructions for successful implementation.

The standard enables small and medium-sized enterprises to take the first steps towards environmental management with a focus on the important section of energy. As for companies with an existing environmental management system, the standard can help to emphasize on the environmental factor of energy even more.

OTHER RELEVANT STANDARDS

- ISO 9001
- ISO 14001
- EMAS
- Sustainability Reports

TRAININGS

- [ISO 50001:2018 Energy Management Systems \(ENMS\) Lead Auditor Training Course](#)
- [ISO 50001 Energy Management System Internal Auditor Course](#)