

**ENERGIAJUHTIMISSÜSTEEMID. NÕUDED KOOS
RAKENDAMISJUHISTEGA**

**Energy management systems - Requirements with
guidance for use (ISO 50001:2018 +
ISO 50001:2018/Amd 1:2024)**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN ISO 50001:2018 +A1:2024 sisaldab Euroopa standardi EN ISO 50001:2018 ja selle muudatuse A1:2024 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 50001:2018+A1:2024 consists of the English text of the European standard EN ISO 50001:2018 and its amendment A1:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.08.2018, muudatus A1 11.08.2024.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 22.08.2018, for A1 11.09.2024.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega   .	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags   .
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 03.100.70; 27.015

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EUROPEAN STANDARD

EN ISO 50001 + A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2018, September 2024

ICS 03.100.70; 27.015

Supersedes EN ISO 50001:2011

English version

**Energy management systems - Requirements with
guidance for use (ISO 50001:2018 + ISO 50001:2018/Amd
1:2024)**

Systèmes de management de l'énergie - Exigences et
recommandations pour la mise en oeuvre (ISO
50001:2018 + ISO 50001:2018/Amd 1:2024)

Energiemanagementsysteme - Anforderungen mit
Anleitung zur Anwendung (ISO 50001:2018 + ISO
50001:2018/Amd 1:2024)

This European Standard was approved by CEN on 6 August 2018. Amendment A1 was approved by CEN on 2 September 2024.

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This European Standard and its Amendment A1 exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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**CEN-CENELEC Management Centre:
Rue de la Science 23, B-1040 Brussels**

European foreword

This document (EN ISO 50001:2018) has been prepared by Technical Committee ISO/TC 301 "Energy management and energy savings" in collaboration with Technical Committee CEN/CLC/JTC 14 "Energy management, energy audits, energy savings" the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

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Endorsement notice

The text of ISO 50001:2018 has been approved by CEN as EN ISO 50001:2018 without any modification.

A1 Amendment A1 European foreword

The text of ISO 50001:2018/Amd 1:2024 has been prepared by Technical Committee ISO/TC 301 "Energy management and energy savings" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 50001:2018/A1:2024 by Technical Committee CEN-CENELEC/JTC 14 "Energy management and energy efficiency in the framework of energy transition" the secretariat of which is held by UNI.

This Amendment to the European Standard EN ISO 50001:2018 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

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According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 50001:2018/Amd 1:2024 has been approved by CEN-CENELEC as EN ISO 50001:2018/A1:2024 without any modification. **A1**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 301, *Energy management and energy savings*.

This second edition cancels and replaces the first edition (ISO 50001:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

- adoption of ISO's requirements for management system standards, including a high-level structure, identical core text, and common terms and definitions, to ensure a high level of compatibility with other management system standards;
- better integration with strategic management processes;
- clarification of language and document structure;
- stronger emphasis on the role of top management;
- adoption of context order for the terms and their definitions in Clause 3 and update of some definitions;
- inclusion of new definitions, including energy performance improvement;
- clarification on exclusions of energy types;

- clarification of “energy review”;
- introduction of the concept of normalization of energy performance indicators [EnPI(s)] and associated energy baselines [EnB(s)];
- addition of details on the energy data collection plan and related requirements (previously energy measurement plan);
- clarification of text related to energy performance indicators [EnPI(s)] and energy baselines [EnB(s)] in order to provide a better understanding of these concepts.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

A1 Amendment A1 Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 301, *Energy management and energy savings*, in accordance with Technical Management Board Resolution 75/2023.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. **A1**

Introduction

0.1 General

The aim of this document is to enable organizations to establish the systems and processes necessary to continually improve energy performance, including energy efficiency, energy use and energy consumption. This document specifies the energy management system (EnMS) requirements for an organization. Successful implementation of an EnMS supports a culture of energy performance improvement that depends upon commitment from all levels of the organization, especially top management. In many instances, this involves cultural changes within an organization.

This document applies to the activities under the control of the organization. Its application can be tailored to fit the specific requirements of the organization, including the complexity of its systems, degree of documented information and available resources. This document does not apply to product use by end-users outside of the scope and boundaries of the EnMS, nor does it apply to product design outside of facilities, equipment, systems or energy-using processes. This document does apply to the design and procurement of facilities, equipment, systems or energy-using processes within the scope and boundaries of the EnMS.

Development and implementation of an EnMS includes an energy policy, objectives, energy targets and action plans related to its energy efficiency, energy use, and energy consumption while meeting applicable legal requirements and other requirements. An EnMS enables an organization to set and achieve objectives and energy targets, to take actions as needed to improve its energy performance, and to demonstrate the conformity of its system to the requirements of this document.

0.2 Energy performance approach

This document provides requirements for a systematic, data-driven and facts-based process, focused on continually improving energy performance. Energy performance is a key element integrated within the concepts introduced in this document in order to ensure effective and measurable results over time. Energy performance is a concept which is related to energy efficiency, energy use and energy consumption. Energy performance indicators (EnPIs) and energy baselines (EnBs) are two interrelated elements addressed in this document to enable organizations to demonstrate energy performance improvement.

0.3 Plan-Do-Check-Act (PDCA) cycle

The EnMS described in this document is based on the Plan-Do-Check-Act (PDCA) continual improvement framework and incorporates energy management into existing organizational practices, as illustrated in Figure 1.

In the context of energy management, the PDCA approach can be outlined as follows.

- **Plan:** understand the context of the organization, establish an energy policy and an energy management team, consider actions to address risks and opportunities, conduct an energy review, identify significant energy uses (SEUs) and establish energy performance indicators (EnPIs), energy baseline(s) (EnBs), objectives and energy targets, and action plans necessary to deliver results that will improve energy performance in accordance with the organization's energy policy.
- **Do:** implement the action plans, operational and maintenance controls, and communication, ensure competence and consider energy performance in design and procurement.
- **Check:** monitor, measure, analyse, evaluate, audit and conduct management review(s) of energy performance and the EnMS.
- **Act:** take actions to address nonconformities and continually improve energy performance and the EnMS.

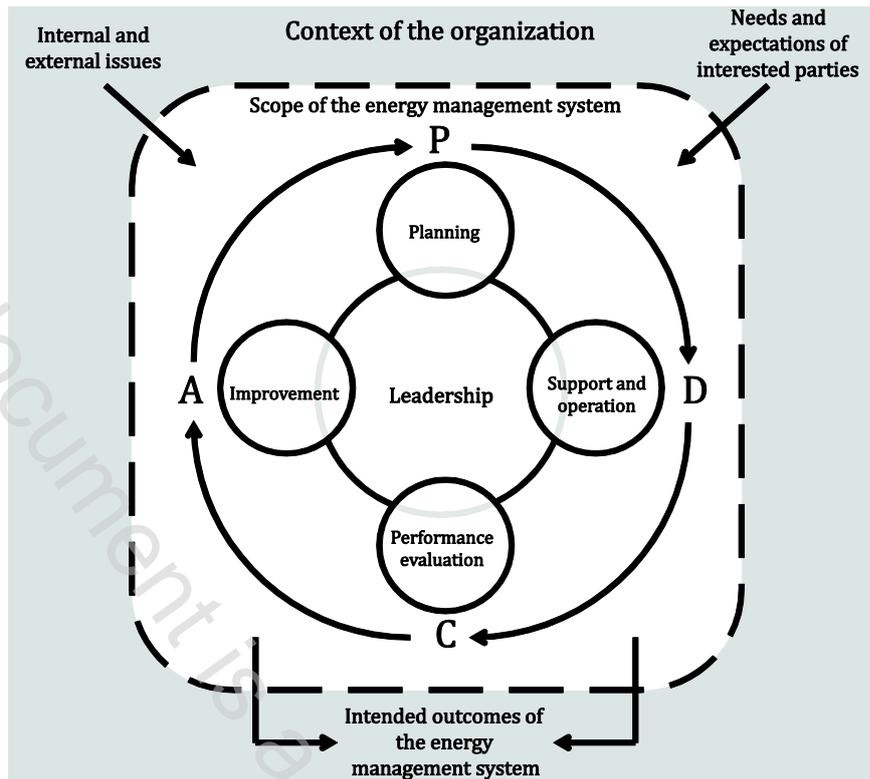


Figure 1 — Plan-Do-Check-Act Cycle

0.4 Compatibility with other management system standards

This document conforms to ISO's requirements for management system standards, including a high-level structure, identical core text, and common terms and definitions, thereby ensuring a high level of compatibility with other management system standards. This document can be used independently; however, an organization can choose to combine its EnMS with other management systems, or integrate its EnMS in the achievement of other business, environmental or social objectives. Two organizations carrying out similar operations, but having different energy performance, can both conform to the requirements of ISO 50001.

This document contains the requirements used to assess conformity. An organization that wishes to demonstrate conformity with this document can do so by:

- making an evaluation and self-declaration, or
- seeking confirmation of its conformance or self-declaration by interested parties, such as customers, or
- seeking certification/registration of its EnMS by an external organization.

In this document, the following verbal forms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “can” indicates a possibility or a capability;
- “may” indicates a permission.

Information marked as “NOTE” is intended to assist the understanding or use of the document. “Notes to entry” used in Clause 3 provide additional information that supplements the terminological data and can contain requirements relating to the use of a term.

0.5 Benefits of this document

Effective implementation of this document provides a systematic approach to improvement of energy performance that can transform the way organizations manage energy. By integrating energy management into business practice, organizations can establish a process for continual improvement of energy performance. By improving energy performance and associated energy costs, organizations can be more competitive. In addition, implementation can lead organizations to meet overall climate change mitigation goals by reducing their energy-related greenhouse gas emissions.

Energy management systems — Requirements with guidance for use

1 Scope

This document specifies requirements for establishing, implementing, maintaining and improving an energy management system (EnMS). The intended outcome is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance and the EnMS.

This document:

- a) is applicable to any organization regardless of its type, size, complexity, geographical location, organizational culture or the products and services it provides;
- b) is applicable to activities affecting energy performance that are managed and controlled by the organization;
- c) is applicable irrespective of the quantity, use, or types of energy consumed;
- d) requires demonstration of continual energy performance improvement, but does not define levels of energy performance improvement to be achieved;
- e) can be used independently, or be aligned or integrated with other management systems.

Annex A provides guidance for the use of this document. Annex B provides a comparison of this edition with the previous edition.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Terms related to organization

3.1.1

organization

person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.4.13)

Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.