



BSI Standards Publication

Energy management systems — Requirements with guidance for use

National foreword

This British Standard is the UK implementation of EN ISO 50001:2018+A1:2024. It is identical to ISO 50001:2018, incorporating amendment 1:2024. It supersedes BS EN ISO 50001:2018, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee SEM/1, Energy Management.

A list of organizations represented on this committee can be obtained on request to its committee manager.

In the UK, organizations wanting to improve their energy performance, decarbonize their GHG emissions, achieve net zero and/or are undertaking activities that are required to comply with The Energy Savings Opportunity Scheme Regulations 2014, as amended from time to time, are encouraged to refer to PAS 51215-1:2025, *Energy and decarbonization assessment — Process — Specification* and PAS 51215-2:2025, *Energy and decarbonization assessment — Competencies of lead assessors and assessment teams — Specification*.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 35410 2

ICS 03.100.70; 03.100.99; 13.020.10; 27.015

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2018.

Amendments/corrigenda issued since publication

Date	Text affected
30 September 2024	Implementation of ISO amendment 1:2024 with CEN/CENELEC endorsement A1:2024
28 February 2025	National foreword text updated

English version

Energy management systems - Requirements with guidance for use (ISO 50001:2018)

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

Energiemanagementsysteme - Anforderungen mit Anleitung zur Anwendung (ISO 50001:2018)

This European Standard was approved by CEN on 6 August 2018.

CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN and CENELEC member.

This European Standard exists 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.

CEN and CENELEC members are the national standards bodies and national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 50001:2011.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

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

European foreword to Amendment 1

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN-CENELEC shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN and CENELEC websites.

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.

Contents

Page

Foreword	v
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Terms related to organization	1
3.2 Terms related to management system	2
3.3 Terms related to requirement	3
3.4 Terms related to performance	4
3.5 Terms related to energy	6
4 Context of the organization	7
4.1 Understanding the organization and its context	7
4.2 Understanding the needs and expectations of interested parties	7
4.3 Determining the scope of the energy management system	8
4.4 Energy management system	8
5 Leadership	8
5.1 Leadership and commitment	8
5.2 Energy policy	9
5.3 Organization roles, responsibilities and authorities	9
6 Planning	10
6.1 Actions to address risks and opportunities	10
6.2 Objectives, energy targets and planning to achieve them	10
6.3 Energy review	11
6.4 Energy performance indicators	11
6.5 Energy baseline	12
6.6 Planning for collection of energy data	12
7 Support	12
7.1 Resources	12
7.2 Competence	13
7.3 Awareness	13
7.4 Communication	13
7.5 Documented information	13
7.5.1 General	13
7.5.2 Creating and updating	14
7.5.3 Control of documented information	14
8 Operation	14
8.1 Operational planning and control	14
8.2 Design	15
8.3 Procurement	15
9 Performance evaluation	15
9.1 Monitoring, measurement, analysis and evaluation of energy performance and the EnMS	15
9.1.1 General	15
9.1.2 Evaluation of compliance with legal requirements and other requirements	16
9.2 Internal audit	16
9.3 Management review	17
10 Improvement	18
10.1 Nonconformity and corrective action	18
10.2 Continual improvement	18
Annex A (informative) Guidance for use	19

Annex B (informative) Correspondence between ISO 50001:2011 and ISO 50001:201827

Bibliography29

Alphabetical list of terms30

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.

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.

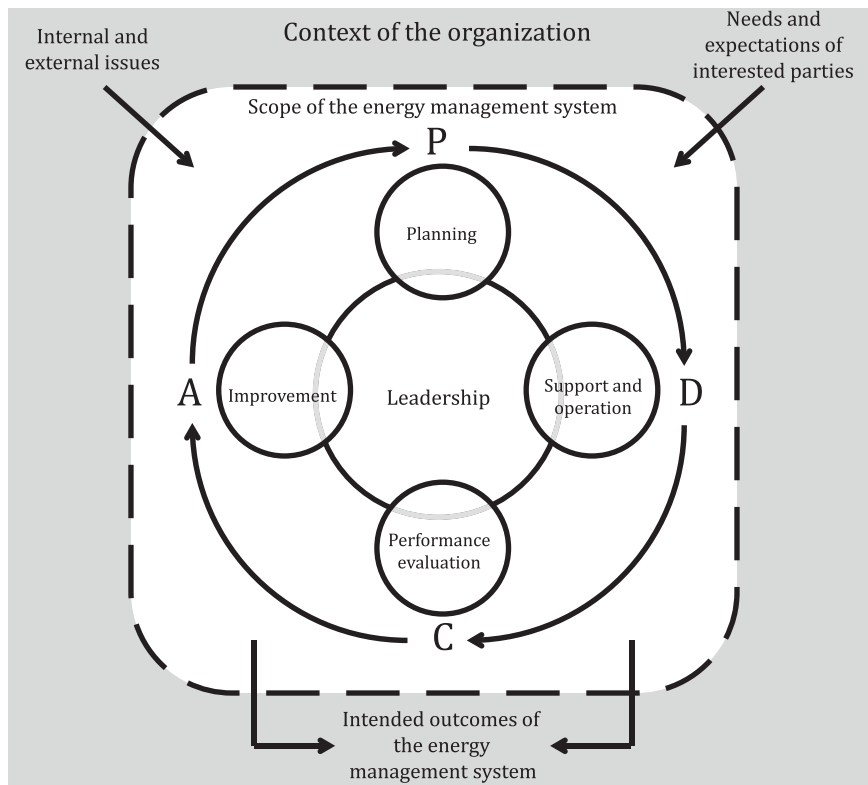


Figure 1 — Plan-Do-Check-Act Cycle

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.

