
**Energy management systems —
Guidance for the implementation,
maintenance and improvement of an
energy management system**

*Systèmes de management de l'énergie — Lignes directrices pour la
mise en oeuvre, la maintenance et l'amélioration d'un système de
management de l'énergie*



This document is a preview generated by EBS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions.....	1
3.2 Abbreviated terms.....	2
4 Energy management system requirements	2
4.1 General requirements.....	2
4.2 Management responsibility.....	2
4.3 Energy policy.....	4
4.4 Energy planning.....	5
4.5 Implementation and operation.....	14
4.6 Checking.....	22
4.7 Management review.....	26
Annex A (informative) Examples of energy policy	28
Annex B (informative) Example of energy review	30
Annex C (informative) Example of an action plan	36
Annex D (informative) Developing measurement plans	37
Annex E (informative) Relationship between key concepts	39
Bibliography	42

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is Technical Committee ISO/TC 242, *Energy management*.

Introduction

This International Standard provides guidance when implementing the requirements of an energy management system (EnMS) based on ISO 50001 and guides the organization to take a systematic approach in order to achieve continual improvement in energy management and energy performance. This International Standard is not prescriptive and each organization determines how to best approach meeting the requirements of ISO 50001.

This International Standard provides guidance to users with varying levels of energy management and EnMS experience, including those:

- with little or no experience of energy management or management system standards;
- undertaking energy efficiency projects but with little or no EnMS experience;
- having an EnMS in place, not necessarily based on ISO 50001;
- having experience with ISO 50001 and looking for additional ideas or suggestions for improvement.

Energy management will be sustainable and most effective when it is integrated with an organization's overall business processes (e.g. operations, finance, quality, maintenance, human resources, procurement, health and safety and environmental).

ISO 50001 can be integrated with other management system standards, such as ISO 9001, ISO 14001, and OHSAS 18001. Integration can have a positive effect on business culture, business practice, embedding energy management into daily practice, operational efficiency and the operating cost of the management system.

The examples and approaches presented in this International Standard are for illustrative purposes. They are neither intended to represent the only possibilities, nor are they necessarily suitable for every organization. In implementing, maintaining or improving an EnMS, it is important that organizations select approaches appropriate to their own circumstances.

This International Standard includes practical help boxes designed to provide the user with ideas, examples and strategies for implementing an EnMS.

Ongoing commitment and engagement by top management is essential to the effective implementation, maintenance and improvement of the EnMS, in order to achieve the benefits in energy performance improvement. Top management demonstrates its commitment through leadership actions and active involvement in the EnMS, ensuring ongoing allocation of resources, including people to implement and sustain the EnMS over time.

Energy management systems — Guidance for the implementation, maintenance and improvement of an energy management system

1 Scope

This International Standard provides practical guidance and examples for establishing, implementing, maintaining and improving an energy management system (EnMS) in accordance with the systematic approach of ISO 50001. The guidance in this International Standard is applicable to any organization, regardless of its size, type, location or level of maturity.

This International Standard does not provide guidance on how to develop an integrated management system.

While the guidance in this International Standard is consistent with the ISO 50001 energy management system model, it is not intended to provide interpretations of the requirements of ISO 50001.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 50001:2011, *Energy management systems — Requirements with guidance for use*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 50001 and the following apply.

3.1.1

commissioning

process by which equipment, a system, a facility or a plant that is installed, is completed or near completion is tested to verify if it functions according to its design specification and intended application

3.1.2

energy balance

accounting of inputs and/or generation of energy supply versus energy outputs based on energy consumption by energy use

Note 1 to entry: Where present, energy storage can be considered within energy supply or energy use.

[SOURCE: ISO 50002:2014, 3.6, modified — Deleted original Notes 1 and 2 to entry; added new Note 1 to entry]