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Energy management systems — Guidelines for a phased implementation

Systèmes de management de l'énergie — Lignes directrices pour une mise en œuvre par étapes

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Foreword

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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).

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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*.

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

It is important to engage all types of organizations and, in particular, small and medium-sized organizations (SMOs) into the broad scale implementation of energy management because of the significant potential such organizations have for energy performance improvement, associated energy cost savings and reductions in greenhouse gas (GHG) emissions.

This document is intended to enable organizations to initiate and improve energy management practices by following a systematic approach with appropriate effort given their resources and context, resulting in continual energy performance improvement.

This document provides practical guidance to undertake a phased implementation of an energy management system (EnMS), e.g. by using in-house capacity. The functioning EnMS can subsequently be extended to meet the requirements of ISO 50001. A well-planned phased implementation of an EnMS can reduce costs and the use of other resources while providing near-term success on which to build. This can help in overcoming barriers for implementation in organizations with limited resources, such as SMOs.

This document explains a phased implementation approach using twelve core elements based on ISO 50001:2018. It outlines the content of the elements and describes four different levels of maturity for each element. Annex A includes best practices for continual improvement of an EnMS by using a phased approach. An organization can select appropriate tools to find an effective and efficient approach to achieve the desired maturity of its EnMS. The element(s) and the corresponding maturity level(s) targeted depend on the organization's objectives and strategic direction. The EnMS can be integrated with other management systems to benefit from common structures.

In this document, both terms "energy performance improvement" (as defined in ISO 50001:2018) and "energy savings" are used. Energy savings is considered as a subset of energy performance improvement in this document.

0.2 Advantages of a phased implementation

Implementing an EnMS in an organization can be a challenge. Organizations can have limited resources (e.g. knowledge and availability of personnel) in order to successfully implement an EnMS. A phased implementation results in several benefits to the organization. The phased implementation described in this document offers flexibility that allows an organization to:

— decide the scope and pace of its EnMS implementation to suit available resources and organizational needs;

— decide on the elements to target and the desired maturity level(s);

— start with areas that indicate the greatest potential for energy performance improvement, return on investment or align with current operational practices;

— stimulate a positive culture towards energy management;

— deliver simple and/or low-cost energy performance improvements and associated energy cost savings, emission reductions and other benefits;

— build initial successes to increase credibility and thus secure commitment and support for further development of the EnMS;

— build a strong foundation to expand an existing EnMS towards meeting the requirements of ISO 50001.

Energy management systems — Guidelines for a phased implementation

1 Scope

This document gives guidance for organizations on establishing a phased approach to implement an energy management system (EnMS). This phased approach is intended to support and simplify the implementation of an EnMS for all types of organizations, in particular for small and medium-sized organizations (SMOs).

This document gives guidance on the use of twelve core elements with four levels of maturity for each element to establish, implement, maintain and improve an EnMS that results in energy performance improvement.

It enables the user of this document to implement a phased approach to achieve a level of energy management appropriate to its objectives and to build a strong foundation which can subsequently be extended towards meeting the requirements of ISO 50001:2018. This document is consistent with ISO 50001:2018 but does not cover all of its requirements.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 50001:2018, *Energy management systems — Requirements with guidance for use*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 50001:2018 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 http://www.electropedia.org/

4 The maturity model approach to implementing an EnMS

4.1 Explanation and structure of the maturity model

Using a maturity model helps an organization to assess the effectiveness of its current business processes in order to follow a systematic and organized approach in achieving improved performance. The maturity model that forms the basis of this document consists of twelve core elements of energy management with four levels of maturity for each element.

The elements in this document either refer to a clause of ISO 50001:2018 or an important subclause such as energy review.

The maturity model provides a simplified, systematic framework to implement and improve an EnMS suitable to the organization's needs and capabilities by using a phased approach. It describes criteria including detailed behaviours, practices and processes. The organization initially uses the maturity