SCCM

stichting coördinatie certificatie managementsystemen voor milieu en gezond en veilig werken

Certification scheme for Energy management systems according to ISO 50001:2018

We at SCCM are convinced – and our experience has proven – that any organization, large or small, will achieve better performance by using the 'plan-do-check-act' approach outlined in the ISO 50001 standard.

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Certification scheme for Energy management systems according to ISO 50001:2018*

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* This (translated) certification scheme is based on NEN-EN-ISO 50001: 2018, the Dutch translation of the European standard EN ISO 50001: 2018. This European standard is identical to the international standard ISO 50001:2018. For convenience, in this certification scheme, the term ISO 50001 is used instead of NEN-EN-ISO 50001:2018.

Contents

CHAPTER 1

1 Introduction 6

CHAPTER 2

2 Guide to and interpretation of ISO 50001:2018 8

CHAPTER 3

3 Organization of the certification body 18
3.1 Principles and general requirements (IS 17021-1 chapters 4 and 5) 18
3.1.1 Impartiality (ISO 17021-1 sections 4.2, 5.2 and 5.3) 18
3.1.2 Response to complaints (ISO 17021-1 section 9.6.7) 18
3.2 Organizational structure of the CB (ISO 17021 -1 chapter 6) 18
3.3 Personnel within the CB (ISO 17021 -1 chapter 7) 18
3.3.1 Competence of management and personnel (ISO 17021-1 section 7.1) 18
3.4 Information exchange between CB and third parties (ISO 17021 -1 chapter 8) 19
3.4.1 Publically accessible information (ISO 17021-1 sections 8.1, 8.2, 8.3 and 8.4) 19
3.4.2 Information exchange between CB and clients (ISO 17021-1 section 8.5) 19

CHAPTER 4

4 Procedures used by the certification body 20
4.1 Preparation for certification (ISO 17021 -1 section 9.1) 20
4.1.1 Application review ISO 17021-1 sections 9.1.1 and 9.1.2) 20
4.1.2 Audit time (ISO 17021-1 sections 9.1.4 and 9.1.5 /ISO 50003 section 5.3) 21
4.2 Initial certification (ISO 17021 -1 section 9.3) 21
4.2.1 Phase 1 audit (preliminary audit) (ISO 17021-1 section 9.3.1.2) 21
4.2.2 Phase 2 (certification audit) (ISO 17021-1 section 9.3.1.3) 21
4.3 Conducting audits (ISO 17021 -1 section 9.4) 22
4.3.1 Evaluation of compliance with legislation and regulations 22
4.3.2 Evaluation of continual improvement (ISO 17021-1 section 9.4.8.3/ ISO 50003 sections 5.6, 5.7, 5.8 and 5.9) 23
4.3.3 Evaluation of energy information 24
4.3.4 Procedures for violations 24
4.3.5 Audit reports (ISO 17021-1 section 9.4.8/ISO 50003 section 5.6) 24
4.4 Maintaining certification (ISO 17021 -1 section 9.6) 25
4.4.1 Surveillance audit (ISO 17021-1 section 9.6.2/ISO 50003 section 5.8) 25
4.4.2 Special audits (ISO 17021-1 section 9.6.4) 25

ANNEXES

1	Documents available for certification	26
2	Explanatory diagrams regarding the energy management system	27
3	Knowledge of energy-related legislation and regulations in the Netherlands	30
4	Use of the ISO 50001 certification scheme abroad	31
5.	Additional information	33

CHAPTER I

Introduction

By entering into an agreement with SCCM (the Association for the Coordination of Certification of Environmental and Occupational Health and Safety Management Systems) in the Netherlands, accredited certification bodies can use this certification scheme, which is based on the worldwide standard ISO 50001:2018 (ISO: International Standardization Organization, based in Geneva). The certification scheme was developed by a Central Committee of Experts (CCE) operating within SCCM and has been approved by the board of SCCM. SCCM qualifies as scheme owner in conformance with the requirements set by the Council for Accreditation. Certification bodies (CBs) associated with SCCM are obliged to follow the scheme developed by SCCM for certification based on the ISO 50001 standard.

The Dutch Council for Accreditation (CA) (RvA) is a body designated by the government to supervise the functioning of the certification and inspection bodies. Certification bodies complying with the requirements set by the RvA can be accredited by the RvA. If a CB develops a certification scheme, it must involve the relevant interested parties. Using an independent scheme owner obviates the need for each CB to develop its own separate scheme. This also promotes a harmonized interpretation of the standard at the basis of the scheme, and a single scheme has added value as an information provider to both CB auditors and organizations wishing certification.

SCCM concludes agreements with both certification bodies accredited for ISO 50001 certification by the RvA or an accreditation body accepted by the IAF (International Accreditation Forum), which is an MLA (Multilateral Recognition Agreement) partner for ISO 50001 and with certification bodies that have an agreement with SCCM for the use of the ISO 14001 certification scheme and are accredited for this.
In addition to the ISO 50001 standard, there are specific requirements from the following documents that are of importance for energy management systems and accrediting CBs:

- NEN-EN-ISO/IEC ISO 17021-1: Conformity assessment - Requirements for bodies providing audit and certification of management systems Part 1: Requirements;
- NEN-ISO 50003: Energy management systems - Requirements for bodies providing audit and certification of energy management;
- NPR-ISO/IEC TS 17022: Conformity assessment - Requirements and recommendations for content of a third-party audit report on management systems;
- IAF MD 2: Transfer of Accredited Certification of Management Systems;
- IAF MD 3: Advanced Surveillance and Recertification Procedures (ASRP);
- IAF MD 4: Use of Computer Assisted Auditing Techniques (“CAAT”) for Accredited Certification of Management Systems;
- IAF MD 11: Audits of integrated management systems;
- SAP-C005: the RvA’s Specific Accreditation Protocol for the certification of energy management systems;
- Any new guidelines published by the EA and/or IAF related to ISO 50001 certification.

NEN-ISO 50003 provides binding guidelines for certification bodies regarding audit time and competence criteria of personnel. The procedures of organizations with multiple sites are also defined in these guidelines. IAF MD 1 is therefore not applicable.

The most recently published version of the above documents is applicable, keeping in mind possible transition periods. As far as these documents are freely available, the latest versions can be found on our website, www.sccm.nl. References to sections of ISO 17021-1 are based on ISO 17021:2015. References to paragraphs from the ISO 50003 are based on the ISO 50003:2014.

SCCM's aim is to prepare a high-quality certificate with a broad support that adds particular value to the relationship between the certified organization and those around it (the government, customers, suppliers and its neighbours). To achieve this broad base, SCCM's Central Committee of Experts (CCE) includes representatives of trade and industry (including trade organizations), the various authorities and other concerned parties.

The certification scheme consists of the following three parts:
→ Guide to and interpretation of the ISO 50001 standard (chapter 2)
→ The organization of the certification body (chapter 3)
→ The procedures used by the certification body (chapter 4)

A number of passages in this document state what SCCM 'expects'. This means that SCCM urgently recommends the action but will waive the requirement if there is good reason to do so.

The first version of the certification scheme for ISO 50001:2018 is the version of 4 June 2019, this version of 30 January 2024 is the second version. An overview of corrections and changes made from the previous version is available at www.sccm.nl under downloads (in Dutch). For corrections, the last version date remains unchanged and a correction number is added. When an amendment is made, a new version date is used. An amendment occurs when there are new requirements that a certified organization and/or certification body must meet.

SCCM has the option to make so-called harmonization agreements. The aim of harmonization agreements is to harmonize the execution of certification audits carried out by certification bodies through further explanation and/or specification of certain parts of a certification scheme. Certification bodies are obliged to follow the harmonization agreements. The issued harmonization agreements are published at www.sccm.nl. A harmonization agreement has a limited period of validity. This is indicated in the harmonization agreement, see https://www.sccm.nl/publicaties-en-downloads/iso-50001.

CHAPTER 2

Guide to and interpretation of ISO 50001:2018

Unless otherwise indicated, the section numbers in this chapter refer to sections in ISO 50001:2018.

SECT. NO.	TITLE OF SECTION IN STANDARD	GUIDE AND INTERPRETATION
	General	Annex A provides a guide to the standard, which is important for a proper understanding of its intention. Several parts of the system use the phrase 'to establish, implement and maintain a process'. Although the term 'procedures' is not used in the standard, 'processes' comes very close. The processes do not have to be laid down in writing. For 8.1, there must be documentation demonstrating that the processes are being carried out as planned, which can be a reason to document the process itself. Organizations may choose to document processes because it offers the organization an advantage for example when the process is delegated or performed again. A documented process can also simplify both internal and external audits. Annex 1 of this publication has an overview of required documents and records, as well as documents and records recommended by SCCM. In order to evaluate the processes, the standard asks at several points that documents or records be kept and to make it demonstrable that the system works effectively.
4.1	**Understanding the organization and its context**	Understanding context is about identifying important issues on a higher abstraction level that may be of significance for the energy policy in both the short and (especially) the long term, because they present either opportunities or risks. The idea of this element is not to determine all of an organization's energy consumption and use (this is the subject of section 6.3). However, types of energy or energy users can emerge that require special attention. Section A.4 names some examples of issues, but the list is not exhaustive. In addition, the following may be relevant: developments in town and country planning, developments among competitors, the needs of shareholders and the technical state of facilities. Important technological options (relevant for defining the objectives in 6.2 and for identifying opportunities for improvement in 6.3) also come into the picture when examining the context. ISO 31000 (Risk management) also has examples of issues. The context analysis is essentially the same for both small and large organizations. The circumstances (such as operations, location, etc.) will determine which topics are covered in the context analysis. The identified important issues can result in risks and opportunities. Opportunities can exist at different levels. They can be opportunities to reduce the effect (or the risks) (such as energy saving measures). They can also be strategic opportunities, for example by changing products/services in such a way that less energy is required, by implementing new production processes, or by using other types of energy. Section 9.3 requires that changes in the external and internal important issues be considered during the management review. This means that the understanding of the context must be kept up to date. It will only be possible to recognize changes if there is a structured understanding of the context. The standard does not require documentation or records for the context analysis. The issues that emerge as important from the context analysis must be used to determine the scope (4.3), establish policy (5.2) and determine the risks and opportunities (6.1). Documentation makes it easier to demonstrate implementation and the consistent use of the results of the context analysis. Figure 1 in Annex 2 shows the relationship between the context analysis and the determination of risks and opportunities.

4.2 Understanding the needs and expectations of interested parties

An understanding of the needs of interested parties (who may also be called stakeholders) must be used in determining the scope (4.3), the risks and opportunities (6.1) and the compliance with legal and other requirements (9.1.2). . This understanding of the needs and expectations is important for determining the criteria used to determine the organization's risks and opportunities as well as the energy review (6.3). This understanding is also important when documenting communication in 7.4.

Every organization has internal and external stakeholders, such as personnel, owners, government authorities, suppliers (including banks and insurers), customers and neighbours. Organizations can also have interested parties farther away, such as sectoral organizations, local interest groups and NGOs.

The number and kind of interested parties will differ for every organization, and will depend on factors such as the nature of the organization's operations, its position in the supply chain, location, and its size and ambitions. This understanding of the needs and expectations of interested parties can be built up by both direct contact and desk research.

Although ISO 50001:2018 does not explicitly require the insight into the needs and expectations of stakeholders to be kept up to date, up-to-date information is needed to guarantee compliance with legal and other requirements. Changes in the internal and external aspects can also have consequences for the composition of the potential stakeholders and their expectations.

One of the objectives of the EnMS is compliance with legal and other obligations. These are obligations voluntarily entered into (such as covenants, demands from customers, contractual agreements) as well as applicable legislation and regulations. The expectations of the competent government authorities, customers and others are identified on the basis of 4.2. The government authorities and other interested parties expect that, at a minimum, the organization will comply with applicable legal and regulatory requirements. Examples of relevant legislation and regulations and other requirements in the Netherlands are included in Appendix 3.
On the basis of section 4.2, the requirements that follow from the legislation and regulations (in ISO 14001 this is 6.1.3) should also be determined. The organization must determine how the legal and other requirements apply to the organization. This means that it must be determined, down to the level of the specific requirements, whether these apply to the organization's energy efficiency, energy usage and energy consumption. The elaboration must be so detailed that both the risks of non-compliance and the measures to ensure compliance can be determined. In addition, the elaboration must substantiate the requirements in 9.1.2 with regard to the evaluation of compliance (see figure 2 of Annex 2 for the correlation between the components of the standard that relate to compliance with legal and other requirements).

Understanding the applicable legal and other requirements must be kept up to date. Figure 2 of Annex 2 shows the components of the standard that are relevant for ensuring compliance with the legal and other requirements. Documentation of the legal and other requirements is not required on the basis of 4.2. However, the information must be available in order to identify changes and to substantiate the self-assessment of compliance (9.1.2).

The strategy and/or guidelines of the parent organization (or concern) that are relevant for energy policy are also part of the legal and other requirements. The guide to 4.3 (scope) indicates under what conditions a part of the organization can implement its own EnMS on the basis of this standard.

4.3 Determining the scope of the energy management system

The scope is partly based on the outcome of the context analysis (4.1) and expectations of interested parties (4.2) and is the basis for determining the risks and opportunities (6.1) and conducting the energy review (6.3).
One of the possible outcomes of the management review (9.3) is a need to modify the EnMS. This may also entail modifying its scope. Reasons to do this can include changes within the organization itself, or in the context.
The organization implementing the EnMS to be certified can be part of a larger organization, as long as the to be certified organization has its own top management, authorized to implement an EnMS. This means that the organization is empowered to formulate its own energy policy and has the resources to implement it.

Defining the scope and determining the organizational boundaries may not be used to exclude operations with significant energy use and/or legal and/or other obligations. These elements are related to the outcome of the context analysis and the credibility of the organization's leadership.

A distinction must be made between the scope based on section 4.3 in the standard and the scope on the certificate. The scope on the certificate is based on the scope determined in its EnMS (see chapter 4 of this certification scheme).

Points to consider when determining the scope for the EnMS are:

- → The scope in the EnSM must make it absolutely clear what is and is not covered by the system; the description will therefore be more detailed than the scope on the certificate. The scope includes information about, for example, operations, processes (both in-house and contracted out), products/services, address(es) with their physical boundaries, organizational boundaries, legal structure and Chamber of Commerce (in Dutch KvK) registration. In the case the organization participates in other organizations, then stating what is not covered under its EnMS will provide clarification. Clarity about what is and is not included in the scope of the EnMS is important for organizations that are required to carry out an energy audit on the basis of the EU Energy Efficiency Directive and want to use the ISO 50001 certificate for this purpose.
- → When the organization wishes to use the ISO 50001 certificate to comply with the energy audit requirements of the EED, it is important that the scope also covers that which the organization intends to achieve.
- → National interpretations of EU regulations may lead to additional requirements. This is the case, for example, with the implementation of the EED in the Netherlands.
- → For the defined scope and boundaries, it is necessary to define the extent (often referred to as scope) to which the energy consumption in the system is controlled (for example: to what extent the energy consumption is generated by third parties, such as the transport of personnel, is also covered by the system). Here, too, there is a correlation with the EED because 'transport' must be included. For the purposes of interpretation in the Netherlands, this includes only transport using the company's own vehicles.
- → On the basis of section 8.1, an organization must also control outsourced processes relating to its significant energy use. On the basis of 8.3 a, the organization must define specifications for the energy performance of outsourced services. It is important that the scope clarifies which processes and/or services are outsourced.
- → In the Netherlands the certification scheme CO_2 performance ladder of the SKAO (Stichting Klimaat-vriendelijk Aanbesteden en Ondernemen - Foundation for Climate-Friendly Procurement and Business) exists. Requirements for the different steps of the ladder correspond to the ISO 50001 requirements. Organizations that are ISO 50001 certified can benefit from the application of their procedures. It is then important that the scope and boundaries of the management system and the chosen range (scope) are overlapping.
- → 'Direct' energy consumption by sources owned or controlled by the organization (for example: in the case of leased properties/rental situations) and the consumption of purchased electricity must always be included. It must be clear to what extent indirect emissions caused by third parties are covered by the system. It is customary to include the energy consumption associated with the transport of goods and people.
- → It must be clear how own energy generation (for example the use of solar collectors, wind turbines and CHP installations) is covered by the EnMS.
- → In the case that the organization to be certified is also ISO 14001 certified, it is important that it is clear to what extent the scope of the environmental and EnMS systems corresponds.

4.4 Energy management system (EnMS)

Organizations can interpret the elements of the standard at the level appropriate to the nature of their operations, risks, and scope. This involves, among other things, the way elements are interpreted, the degree of detail and of integration with other company functions and processes.

This allows the environmental, energy, quality assurance and/or occupational health and safety management systems (or elements of them) to be integrated in a single system.
Organizations using ISO 26000 to implement their sustainability policy can, for elements of the EnMS (such as 4.1 and 4.2), make use of the processes developed in that framework (see 0.1 and 1 in which environment (including the use of energy) is considered one of the pillars of sustainability).

The standard does not require a manual. To be certified, the organization must provide demonstrable evidence that the system satisfies the requirements in the standard, and that it works. This must be demonstrated by the documented information required in the standard (see 7.5), which also includes the required records.
An organization can choose to expand the documented information by also establishing processes (see Annex 1 of this certification scheme).

5.1	**Leadership and commitment**	The standard defines top management as the person or group of people who directs and controls the organization at the highest level (see 3.1.2). In the event that the organization to be certified is part of a larger organization, top management is the person or group of people who directs that part of the organization (see remark 2 in the definition). Directing means that the top management is authorized to make decisions about establishing and implementing the energy policy and allocating the necessary resources. Top management has final responsibility for the operation of the EnMS. In order to be able to elaborate the points stated in 5.1, top management will have to be actively engaged, and be sufficiently involved and up to date about the various elements of its EnMS that if necessary they can direct and adapt them if needed and make necessary resources available. Top management has explicit responsibility for establishing, implementing and maintaining the policy (5.2), defining responsibilities and authorities (5.3) and the management review (9.3). On the basis of 5.3, the results of the EnMS must be reported to top management. The management must ensure that the energy policy and the objectives and targets (5.1. b) are compatible with the strategic direction. This means that the subject of energy must be included when a long-term plan is drawn up. Compatibility with long-term planning is important, because the reduction of energy consumption is often linked to long-term investments. For many organizations, a strategic vision of the investments and their own activities is essential to achieve substantial improvements. The management must appoint an energy management team (5.1 i), whereby it is essential that this team is comprised of key persons in the organization who are able to promote awareness in the field of energy.
5.2	**Energy policy**	The energy policy must be available as documented information, be communicated within the organization and be available to interested parties. How this is to be done is an element of communication (7.4). The standard requires that the policy provide a framework for establishing the objectives. This means that, in addition to general commitments to continual improvement and compliance with legal and other requirements, the policy is also sufficiently strategic to allow more tactical and operational objectives and targets as in 6.2 to be formulated. One way to do this is to document the organization's ambitions with regard to the important issues from the context analysis. The energy policy can be integrated into other policy documents such as an environmental policy statement. If the environmental policy statement is used, it is important to take into account that some of the requirements are overlapping, but also that ISO 50001 has additional requirements (such as 5.2 c, commitment to ensure the availability of information and necessary resources and 5.2 f, support for the procurement of energy-efficient products and services and design).
5.3	**Organizational roles, responsibilities and authorities**	In line with the requirements in 5.1 regarding leadership, top management has the responsibility to assign responsibilities and authorities. The 'management representative' in previous versions of ISO 50001 is no longer required. This is part of the responsibility that top management itself must take.
6.1.1	**Actions to address risks and opportunities, general**	The organization must determine its risks and opportunities in achieving the result intended with the EnMS. These can be both short- and long-term. Long-term risks and opportunities will mainly be found during the context analysis (4.1 and 4.2). In the short term, risks and opportunities will be mainly related to the significant energy users from 6.3 and the legal and other requirements from 4.2. Two PDCA cycles can be seen here: an improvement cycle at strategic level and one at operational level (see figure 3 of Annex 2). Measures aimed at improved control over risks can be viewed as opportunities for improvement. These opportunities result from the context analysis (e.g. technological options) and other processes. It can be expected that the identified risks and opportunitie and the system of weighing (criteria, scores / weights etc.) will be documented (see 7.5 b). This enables a correct and unambiguous re-evaluation as required in the management review (see 9.3).

6.1.2	**Planning action**	The organization must decide what action should be taken to address its risks and opportunities, for example: → Organizational and technical control measures aimed at continuously meeting a previously set performance level. → Measures for improvement, in order to achieve a higher performance level. Measures for improvement may also include research into new technologies that can lead to better energy performance. Using 6.1.2 as a basis, it must be indicated which control measures are being implemented for the risks and opportunities identified in 6.1.1 and/or where they are integrated in its EnMS. Where necessary, objectives and targets based on 6.2 can be formulated for these measures. The effectiveness of these measures must be evaluated, as this is part of monitoring and measuring as described in 9.1.1 and 9.1.2. Measures for improvement will be primarily directed at the significant energy users (see 6.3) and/or legal and other requirements with higher risks. Objectives and plans as in 6.2 will be primarily formulated for these risks.
6.2	**Objectives, energy targets and planning to achieve them**	Energy objectives can exist at different levels: strategic, tactical and operational (see A.6.2). The more strategic energy objectives can be included in the energy policy (5.2). The energy policy (5.2) establishes the issues for which objectives are formulated and the level of ambition (within the technological, financial and operational limitations). To follow the process of achieving the objectives, it is important that they are 'translated' into objectives and targets at the various levels and/or positions involved in the organization. This integrates them (and the efforts to undertake to achieve them) in the organization's everyday operations. For organizations that are a part of a larger organization, the level of the objectives must be in line with the hierarchical position of the top management of the organization to be certified. It is important that objectives and energy targets are formulated using the SMART system, which makes it possible to follow progress using indicators (see 9.1.1). The objectives must be documented.
6.3	**Energy review**	To develop the energy review a distinction is made between energy consumption (the amount of energy that is used) and energy usage (the way in which energy is used, for example: for ventilation, heating, processes etc.) and energy sources (electricity, fuels, heat etc.). Significant energy users and the opportunities for improvement of energy performance are determined on the basis of the energy review carried out in accordance with section 6.3. The determination of the significance is based on criteria that are to be determined by the organization. To determine the significance, the results of the context analysis (4.1 and 4.2) can give direction to the criteria to be used. The significant energy users are used for determining the targets (6.2), creating awareness (7.3), the necessary monitoring and measurements (9.1.1), and the management review (9.3). The width of the energy review is determined by the definition of the scope (see 4.3). The methodology and criteria used to carry out an energy review must be documented. The criteria may include: → the extent to which energy sources are to be considered; → when metering is or is not applied; → when a user is considered to be significant; → how far back in time information is collected; → the frequency and/or criteria for updating the energy review. The energy review in 6.3 consists of an outline analysis of energy consumption (for the organization as a whole, using different energy sources) and energy usage (in 6.3 a), and a more detailed analysis to identify those facilities, appliances or processes that have a significant impact on energy consumption (6.3 b and c). The significance can be determined on the basis of volume of consumption and/or the potential for improving the energy performance. By also including the improvement potential in the determination of the significance, overlooking relatively small consumers (such as electric motors) is avoided.

Information about the (electricity) load profiles can be important for gaining insight into the energy consumption and usage. This information must be present when the ISO 50001 certificate is used to comply with the energy audit from the EED (Energy Efficiency Directive, Annex VI a).

When identifying consumption and use, the company's own energy generation and any residual heat used must also be taken into account.

Different types of instruments can be used when carrying out an energy review, for example:
→ ECA (Energy Consumption Analysis)[1] (only in Dutch language available);
→ energy label methodology (for utility buildings, for example);
→ energy balance.

The CCE assumes that the depth of the analysis in 6.3 a is set up to provide a detailed overview of all existing energy flows within the company, their size and distribution by function, and possible conversion to other energy carriers. This includes, among other things, the energy consumption of buildings or groups of buildings, industrial processes or installations, including transport and heat. This overview should be 'proportional' and 'sufficiently representative' (as defined in the guidelines of the EED Directive, for example) in order to provide a reliable view of energy usage and possible savings measures. A 'residual item' of approximately 10% of the total energy consumption is still acceptable in practice under normal circumstances.

Insight into the consumption can be obtained by metering and/or by calculating the consumption on the basis of specifications. An energy balance is obtained by combining the energy consumption with energy usage.
The primary concern of the energy review is the current consumption. If an energy baseline (EnB) is used as a reference that is based on data from the past, the energy review must also relate to developments from that moment on.

In order to identify opportunities to reduce energy consumption and/or make use of alternative energy sources, a long-term vision of the organization that is in line with the strategic direction of the organization is also necessary (see also 5.1 b). This concerns the products/services and processes that may or may not be carried out in-house, and the energy sources that are used. In this context, it is important, for example, to have insight into the lifespan of installations, so that alternatives can be investigated in good time. The use of, for example, residual heat (from internal or external sources) requires preparation that must be planned in good time.

Variables (6.3 c) 1) may include:
→ capacity utilization/production volume of production;
→ weather conditions;
→ state of maintenance (for example: leakage, calibrations);
→ breaks for major maintenance purposes, for example.

Depending on the chosen scope (see 4.3), data will also have to be collected to determine the energy consumption associated with products or services purchased from third parties. This concerns, for example, purchased transport services (goods and/or persons).

Control measures may be necessary for significant energy users that are not identified as a risk or opportunity for the organization in 6.3 (to ensure that the risk also remains low).

The result of the energy review must be documented together with the methods and criteria used.

[1] Downloadable via: https://www.rvo.nl/sites/default/files/bijlagen/EVA_Handleiding%20EnergieVerbruiksAnalyse_19-12-2008.pdf

6.4	**Energy performance indicators**	The Energy Performance Indicators (EnPIs) formulated in accordance with this section of the standard form the basis for the monitoring obligations in 9.1.1. EnPIs must be chosen to enable actual control of energy consumption. EnPIs can consist of a parameter (absolute energy consumption), energy consumption per unit (for example: working day, weekend day, manufacturing time, product, shift) or a multivariable model (E=A*x+B*y+...) for which variables can be: production volume, outside temperature or another variable.
6.5	**Energy baseline (EnB)**	An organization can have multiple energy consumption references (EnBs), for each source, for example. There must be criteria to justify the choice of the year of the reference. The way in which the reference is calculated must be fixed, including any corrections or assumptions that have been made. Corrections may be necessary, for example, where activities are outsourced or divested.
6.6	**Planning for collecting energy data**	In order to enable the monitoring of the energy performance (see 9.1.1), it is important to determine timely what needs to be measured in order to be able to assess afterwards whether the objectives have been achieved. Meters may have to be installed for this purpose, for example. It is customary to establish in a monitoring plan what, when and how measurements are taken and what the requirements of these measurements are. In order to demonstrate the reliability of the communicated information (see 7.4) and the validity of the results (9.1.1 b), documentation of the monitoring plan is expected by the CCE.
7.1	**Resources**	The responsibility for allocating sufficient resources lies primarily with top management (see 5.1). Top management must make a complete assessment since according to 5.1, the energy policy must be compatible with the strategic direction of the organization. One criterion for assessing the availability of resources in the context of the energy policy is the Best Available Technologies (BAT). The context analysis provides information about technological and other options, such as those used in similar organizations.
7.2	**Competence**	Competence must be expressed in the knowledge and skills a person needs to have. Education or training helps one acquire competences. The knowledge and skills necessary will depend on the duties and responsibility of an individual. The necessary competences, and their acquisition by individuals, must be established and documented. If someone lacks a required competence, then the organization must take action, for example by providing them with training or employing different people. The training necessary for a given task must be identified. The requirements regarding competence also relate to temporary or long-term contracted (temporary) personnel whose tasks can influence the organization's energy performance. Competences concern both persons who influence the achievement of the energy performance and those who are responsible for the EnMS itself (such as members of the EnMS team and internal auditors). Achieving the energy performance depends on people whose behaviour and/or work can directly or indirectly influence the energy consumption. The following groups can be identified: → operators and production workers who are directly involved with important energy users; → technicians involved in the development and maintenance (both internally and externally) of major energy users; → transport planners; → purchasers; → supporting service providers (cleaners, security); → the management at different levels of the organization who have an impact on the aforementioned groups. Competence requirements can also emerge from legal and other obligations.
7.3	**Awareness**	Awareness is expressed by a person's attitude and behaviour. It is the products of, for example, the way in which top management interprets showing leadership as required in 5.1, of internal communications about the energy policy and significant energy users or of training and instructions. To achieve this awareness, personnel must be familiar with the energy policy, the significant energy use related to their own tasks, their potential contribution to achieving the energy performance, and the applicable legal and other requirements. The degree of awareness will be clear from e.g. reports of nonconformities and near-nonconformities, from people addressing others as to their attitude and behaviour, from root-cause analyses of nonconformities, from results of internal audits, and results of measurements and monitoring.

7.4	**Communication**	Communication involves both receiving and distributing information. Internal and external communication also includes communications for the purpose of updating the context analysis. Bringing about a dialogue can be important in this process. The results of the context analysis, in particular 4.2 with regard to interested parties, will provide information for working out the element of communication in more detail. The legal and other requirements (4.2) may produce reporting obligations, both legally required reports and voluntary contractual obligations (such as Responsible Care in the chemical industry and CO_2-Performance Ladder in the Netherlands). Legal and other requirements regarding whether or not to report noncompliance, unusual incidents or changes (to bodies such as the competent authority) must be included in the process of communication, as well as other information related to performance (sect. 9.1.1). The information the organization communicates must agree with the information obtained using the EnMS, and it must be reliable. This indirectly sets requirements for the quality of monitoring, measuring, analysis and evaluation of performance in 9.1.1 and 9.1.2. 'Reliable' information is understood to be complete and relevant, as well as of high quality. Communication must not be misleading. Complaint handling is part of external communication.
7.5	**Documented information**	Documented information supports the effective implementation of the EnMS and is not a goal in itself. In the standard, a distinction is made between documentation that is 'kept up to date', which are registrations (records), and documentation that is 'maintained', this concerns process descriptions; policy, etc. The documented information must provide evidence demonstrating that the EnMS works properly. Documented information may also be in digital form. It must be clear from the documented information: → what the status and date of revision are; → who has access to it and can modify it; → how long it is retained and how it will be removed and/or destroyed. Since certification has a three-year cycle, the documented information must be kept and be accessible for at least three years. The information must be protected from improper use and/or modification. The rules for access and security can differ for different kinds of information. For example, production figures can be important for the EnMS, but at the same time can also be confidential in connection with sensitivity to competition.
8.1	**Operational planning and control**	Operational planning and control involve the operations, products and services established within the scope of the EnMS (see 4.3). The risks and opportunities associated with energy use and consumption, as well as the compliance with legal and other requirements for which operational planning and control is necessary, in order to achieve the energy objectives and/or to ensure the compliance with legal and other requirements will come from 6.1. Operational control can consist of, for example, technical measures, control instruments, or procedures and operational instructions that are relevant for achieving the energy objectives. The details and the severity of the control measures (and possibly measures for monitoring and measurements necessary for control in 9.1) will depend on the scope of the risks and the objectives determined in 6.2. Managing planned or unplanned changes (MoC - Management of Change) is an element of 8.1. This is an important element of the EnMS which also relates to other elements of the EnMS, such as determining significant energy users (6.3), internal communication (7.4), internal audit programme (9.2) and management review (9.3).
8.2	**Design**	Adapted or renovated facilities, equipment, systems and energy-using processes also include the maintenance and replacement of components. When new products/services are developed, the consequences for energy consumption must be taken into account in the design of the production or supply (including any procurement) in advance. New products/services may also lead to an increase in energy consumption in the production or supply. In the case of significant differences, the organization will have to be able to substantiate the necessity (for example: increased consumption in the production may be related to lower consumption in the usage phase).

8.3	**Procurement**	This article deals with the procurement of energy services, installations and energy related to the company's own production and supply, and not, for example, to the purchase of products (such as raw materials, parts, semi-finished products) or the outsourcing of certain activities insofar as these are not determined in the scope (see explanation in 4.3). Annex A 8.3 refers to the possibility of using the EnMS in the supply chain. However, this is not an obligation. Organizations in the Netherlands that are connected to the MJA or MEE covenant are, however, required to consider also the energy consumption in the supply chain. The EnMS can be used to ensure this. When purchasing production equipment, it is important to include the energy consumption and the costs over the entire lifespan in the decision-making process. It is possible, for example, that a higher investment will eventually be recovered. Factors such as maintenance costs can also influence this (Total Cost of Ownership). Examples of specifications for energy procurement include: → general: selecting the best available techniques; → when replacing class IE3 electric motors: Premium efficiency; → purchasing 'green' electricity.
9.1	**Monitoring, measurement, analysis and evaluation**	The certificate holder must measure and monitor in order to provide evidence that its EnMS is working properly. The organization itself defines the methods to use and the frequency of measuring and monitoring. The frequency will depend partly on the risks at issue and on any legal and other requirements. The minimal frequency with which issues are measured and monitored must be in line with the frequency of the management review, which is usually once a year in connection with the planning and budget cycle. The standard requires that the results of monitoring, measurement and evaluation be valid and reliable. To be able to assess this, it is important that the results are reproducible and sources are traceable. The method also includes the way that results of measurements are processed into information about energy us and energy consumption (such as calculation methods). Providing reliable information requires devoting some attention to the necessary administrative capabilities. An organization itself determines the form and frequency with which it is determined whether the legal and other requirements are met. The frequency depends on the risks associated with particular requirements. If a noncompliance is identified, measures must be taken to control and correct it (see 10.1). In the event of nonconformities, it must determine whether it is necessary to communicate with interested parties such as the competent authority for legal requirements (see 7.4 and 4.2).
9.2	**Internal audit**	The internal audits are intended to evaluate whether the EnMS meets the requirements in the standard, the organization's own requirements, and that it functions in practice and is maintained. The frequency with which given operations/processes are audited is linked to factors such as the associated risks and opportunities (see 6.1), any changes that need to be addressed, and the monitoring results (see 9.1). The audit programme must be designed so that the organization can make an evaluation of the implementation of its EnMS in all operations/processes and any other offices covered by its scope (see 4.3). The audit results must be reported to 'relevant' management. Top management shall assign the responsibilities for reporting on the performance of the management system (see 5.3). If nonconformities are identified during an internal audit, they must be dealt with according to the requirements in 10.1. Internal audits for ISO 14001 and ISO 50001 can be carried out in combination. A point of attention is then that the parts specific to ISO 50001 are also explicitly addressed, and that auditors are qualified for this.

9.3	**Management review**	Section 5.1 of the standard asks that the EnMS be integrated with other business processes and the organization's strategic direction. For most organizations this is a one-year cycle, and the management review must be linked to this cycle. Given the commitment asked of top management in 5.1, some issues, e.g. those with a higher risk, need more frequent attention from top management in order to steer any developments in a timely manner. The standard requires that a number of issues be at least considered during the management review. It must be demonstrable that top management itself has made an evaluation, in line with the requirements for demonstrating leadership for top management in 5.1. The input for the management review is not defined in 9.3, as it results from the issues mentioned in 9.3 that are to be considered in the management review. In addition to the issues mentioned under 9.3.2, any changes in the legal and other requirements can also have consequences, which makes it important to take them into account in the management review.
10.1	**Nonconformity and corrective action**	An organization, according to 10.2, must respond to a nonconformity and deal with any consequences it has. A root-cause analysis is of great importance in an effective EnMS (see 10.2 b). The root-cause analysis can also be related to resources (7.1), competencies (7.2), awareness (7.3) or control of processes (8.1). If a nonconformity is related to compliance with legal and other requirements, the organization must determine whether it is necessary to communicate with the interested parties involved (such as the competent authority) about the nonconformity, and if necessary to communicate (see also 7.4 and 9.1.1). Nonconformities can be a reason to make changes to the EnMS (10.2 e). In particular, the need to make changes in the identified risks and opportunities (6.1) must be considered.
10.2	**Continual improvement**	Continual improvement must aim to improve the organization's energy performance as laid down in the energy policy (5.2). The improvement is a result of taking action that results in a reduction of risks and/or taking identified opportunities. The outcome of the context analysis (4.1 and 4.2) gives a frame of reference for the level of the improvement. If documents such as the BAT reference documents apply, the improvement has a legal basis. The identified technological options and the degree to which these are applied by colleagues and considered the state of the art are also frames of reference. The organization will have to justify its continual improvement process on the basis of the outcomes of the context analysis.

CHAPTER 3

Organization of the certification body

To be accredited to perform certification work, a certification body (CB) must meet the NEN-EN-ISO/IEC ISO 17021-1 standard 'Conformity Assessment - requirements for bodies providing audit and certification of management systems' and other related standards and guidelines as mentioned in the introduction. The ISO 17021 contains both structural and procedural requirements. SCCM can interpret these requirements where necessary and can set additional requirements.

Chapters 1 through 8 and 10 of the ISO 17021-1 contain organizational requirements.

In the event of an accreditation evaluation, the text of the NEN-EN-ISO/IEC ISO 17021-1 and the NEN-ISO 50003,, along with this certification scheme, is binding.

3.1 Principles and general requirements (ISO 17021-1 chapters 4 and 5)

3.1.1 Impartiality (ISO 17021-1 sections 4.2, 5.2 and 5.3)

Personnel may not have been involved as consultants for the organization to be certified (see ISO 17021-1 definition 3.3) about either its energy management system or any other management systems. If a member of the certification personnel has worked for the CB for less than two years, or work part-time for the CB, the CB must make sure that this person has not participated in any other way in the development, implementation or maintenance of management systems at the organization to be certified (for example as a consultant or internal auditor).

Performing a 'pre-audit' is not considered consultancy as long as it only involves an evaluation of the implemented system, and no advice is given about rectifying eventual violations or non-compliance.

3.1.2 Response to complaints (ISO 17021-1 section 9.6.7)

The CB must inform SCCM as soon as possible, but in any case within two weeks, of complaints submitted by third parties (such as the competent authority) to the CB about a certificate it has issued (i.e. not objections from organizations certified by the CB). SCCM will publish the number and nature of the complaints in its annual report.

3.2 Organizational structure of the CB (ISO 17021-1 chapter 6)

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3.3 Personnel within the CB (ISO 17021-1 chapter 7)

3.3.1 Competence of management and personnel (ISO 17021-1 section 7.1)

ISO 50003 specifies the competence requirements set in ISO 17021-1. SCCM expects auditors and decision makers to have a working and thinking level at higher professional education level. A CB can use its own system to define the management of competences.
ISO 17021-1 uses the term 'technical area', in ISO 50003 this is filled in for the certification of energy management systems.
Annex 3 defines the legislation and regulations relevant for ISO 50001 certification in the Netherlands.

3.4 Information exchange between CB and third parties (ISO 17021-1 chapter 8)

3.4.1 Publicly accessible information (ISO 17021-1 sections 8.1, 8.2, 8.3 and 8.4)

The CBs must include on the certificate the fact that the certificate was issued on the basis of the SCCM certification scheme. A copy of the certificate or a modified certificate must be provided to SCCM immediately. SCCM publishes the certificates on the Internet.

The following apply to suspension or withdrawal of a certificate:

- → The CB shall inform SCCM immediately if a certificate has been suspended, and SCCM will indicate the suspension on its Internet database;
- → If the CB suspends a certificate, it will inform SCCM of the suspension as soon as possible, but in any case within 1 week. SCCM will remove the certificate from its directory of certified organizations.

The information on the certificate must make it clear to potential users which organization is certified for what activities and must not be misleading. In particular:

- → The name of the organization as it appears on the certificate must correspond with the level of hierarchy at which the management review is performed (such as Organization x, business unit y);
- → The scope on the certificate contains a concise description of the operations of the organization covered by the certificate. The scope must be within the scope established by the organization to be certified (ISO 50001 sec. 4.1). This description may not contain value judgements;
- → Branches of the organization at other addresses and/or cities will be included on the certificate in such a way that they are traceable;
- → If a partial certificate is granted to one part or location covered by a larger concern's certificate, it must be clear for all concerned that this partial certificate is not an independent certification and cannot be seen as separate from the certificate of this larger concern, the number of which must be included on the partial certificate;
- → If there is a need for more detailed information about what the ISO 50001 certificate involves (such as addresses of other sites, names of products or services) the certificate may make reference to an annex, validated by the CB, where this information appears.

3.4.2 Information exchange between a CB and clients (ISO 17021-1 section 8.5)

The organization with a certified energy management system is responsible for continuing to comply with all requirements. If this is no longer the case, the organization itself must report this to the CB.

This is not a question of nonconformities identified in internal audits, for example, and which can be solved quickly, but of structural nonconformities which have or can have consequences for the environment or those in the vicinity such that complaints or action from the authorities can be expected. See also section 4.5.2, which discusses nonconformities for which a CB must perform an additional interim audit.

CHAPTER 4

Procedures used by the certification body

A CB wanting to be accredited for performing certification must meet the NEN-EN-ISO/IEC ISO 17021-1 standard 'Conformity Assessment - requirements for bodies providing audit and certification of management systems' and other related standards and guidelines as stated in the introduction. The ISO 17021-1 standard contains requirements for both organizational structure and the CB's procedures. SCCM can provide an interpretation of these requirements, where necessary.

Chapter 9 of ISO 17021-1 contains requirements related to the procedures used during the certification process.

In any accreditation assessment, the text of NEN-EN-ISO/IEC ISO 17021-1 and NEN-ISO 50003, along with this document, is binding.

4.1 Preparation for certification (ISO 17021-1 section 9.1)

4.1.1 Application review (ISO 17021-1 sections 9.1.1 and 9.1.2)

The organization to be certified must establish the scope of its energy management system (ISO 50001 section 4.1). Chapter 2 of this certification scheme provides a guide to how to do this. A distinction must be made between the scope defined in its energy management system and the information on the certificate.
A concise description of the operations and all sites covered by the certificate must appear on the certificate.
This information on the certificate comes from the description of the scope within the energy management system.

The CB must determine whether the scope is in line with the requirements in the ISO 50001 standard (section 4.1). It concerns the scope of the activities, facilities and decisions that the organization can control by means of an EnMS. The energy use of products intended for third parties that may be or have been developed by an organization must fall outside the scope of the energy management system.

SCCM has further specified the procedures for determining the scope for the following situation:

Certification of an activity within a large organization with multiple activities
If within an organization, more than one division, business unit, subsidiary, etc. carry out activities, then a separate activity can be certified if it:
→ has its own management;
→ can pursue its policy and has an independently functioning energy management system;
→ has its own production or other facilities, each separately responsible for the observance of legislation and regulations and any environmental permits.

Section 3.4.1 of this certification scheme contains indications for the organization mentioned on the certificate.

4.1.2 Audit time (ISO 17021-1 sections 9.1.4 and 9.1.5 / ISO 50003 section 5.3)

ISO 50003 section 5.3 must be used to determine time schedules. The amount of time spent depends on the complexity of the organization and the number of people who are effectively involved in the realization of the requirements imposed on the energy management system (these must have a substantial impact on the results). The complexity is determined on the basis of the following factors:

→ the extent of the annual energy consumption;
→ the number of energy sources;
→ the number of significant ways of using energy.

The systematics are elaborated in Annex A of ISO 50003 (including the timetable to be used).

The following guidelines are important when determining time schedules:

→ The IAF MD 3: Advanced Surveillance and Recertification Procedures (ASRP). The IAF MD 3 is intended for the certification of environmental and quality management systems. The CCE states that the IAF MD 3 also applies to the certification of energy management systems, because energy is one of the possible environmental aspects. The criteria in the IAF MD 3 that apply to environmental management system certification are applicable;
→ IAF MD 4: Use of Computer Assisted Auditing Techniques ("CAAT") for Accredited Certification of Management Systems;
→ The IAF MD 11 (Audits of integrated management systems) provides possible ways to reduce the amount of time spent by combining audits of different management systems.

4.2 Initial certification (ISO 17021-1 section 9.3)

4.2.1 Phase 1 (preliminary) audit (ISO 17021-1 section 9.3.1.2)

According to SCCM, the CB must determine whether the scope chosen by the organization corresponds with the factual situation.

One element of the preliminary audit is a document audit (see ISO 17021-1 sec. 9.3.1.2). The place where the preliminary audit is to be performed can be determined in consultation with the organization. Annex 1 has a list of documents important for the preliminary audit.

The preliminary audit must determine whether the various elements of the energy management system are in place and have been implemented. The quality of implementation is determined during phase 2.
The implementation must be complete enough that there can be a finding in the phase 2 audit report about the functioning of its energy management system (see 4.3.1 and 4.3.2 of this certification scheme).
The purpose of phase 1 is to determine whether the organization is ready for the evaluation of the implementation in phase 2.

The preliminary audit may be combined with audits of other management systems. However, doing so must not jeopardize the quality and depth of the audit. In a combined audit as well, the report must clearly indicate all the aspects relevant to the energy management system.

4.2.2 Phase 2 (certification audit) (ISO 17021-1 section 9.3.1.3)

Chapter 2 (interpretation and guide to ISO 50001) explains the relationship between the various elements of the standard. This relationship is evaluated by following audit trails during phase 2.

In addition to the points required by ISO 17021-1, SCCM expects that the certification audit shall also include:
→ an interview with the top management responsible for that site;
→ a tour of the site, including an investigation of the implementation of the energy management system on the work floor (among other things by conducting interviews).

4.3 Conducting audits (ISO 17021-1 section 9.4)

4.3.1 Evaluation of compliance with legislation and regulations

According to ISO 17021-1 section 9.4.8.3, the audit report must contain a statement regarding the effectiveness of the energy management system as concerns its compliance with legislation and regulations. The following points are important for evaluating whether the energy management system is implemented in such a way that the organization is able to comply with legislation and regulations:
→ The CB must evaluate whether the various elements of the ISO 50001 standard that are important for ensuring compliance (including the level of detail of the identified legislation and regulations, the procedure for updating the list of identified legal and other compliance points, identification and communication of incidents, the self-assessment procedure, the procedure for reporting to management) are worked out in sufficient detail that it is possible to ensure compliance.
→ The CB must evaluate the functioning of the elements by using a combination of audit trails in which all the relevant steps for ensuring compliance with particular requirements in legislation and regulations are followed, and by sampling (spot checks) to evaluate compliance with specific requirements from legislation and regulations. The purpose of these evaluations is to understand how the energy management system works and not to report on the actual compliance.
→ A properly functioning energy management system will provide results indicating the degree of compliance with legislation and regulations. These results must be documented within the energy management system.
→ The functioning of the energy management system must be the basis for the CB's justified confidence that the organization is indeed in compliance with legislation and regulations.
→ Since the evaluation is based on a spot check and on a limited period of time, having well-grounded confidence does not necessarily mean that compliance with legislation and regulations can be guaranteed.

If there are sufficient grounds to do so, the certification body may consult public sources in order to verify whether the information supplied by the organization is correct. Under the Netherland's Open Government Act (Wet Openbaarheid Bestuur), the competent authority's public information sources may be consulted in order to evaluate whether:
→ the organization's records of communication with the government are complete, for example inspection reports made public on the Internet;
→ all sites and facilities of the organization to be certified are also covered by the current licence;
→ here are new developments regarding differences of opinion between the organization and the authorities;
→ the organization cannot be reproached for the fact that permits are lacking.

This opportunity may be taken when it contributes to acquiring justifiable confidence. In principle, the certification body makes use of information supplied by the organization, or available within the organization.

If the CB wishes information from the competent authority other than that already in publicly available sources, then in principle the organization itself shall request this information, unless other agreements have been made between the organization and the CB.

The CB must in any case decide against certification, or withdraw the certificate[1] if one or more of the following situations occurs:

→ The certification body has serious doubts about whether the organization can achieve its intention to comply with legal requirements using its energy management system.
→ Procedures for corrective and preventive action are not effective. This is certainly the case if, for example, requirements relating to energy consumption, usage and efficiency have been systematically violated and written agreements with authorities regarding this matter are not available.
→ Procedures for reporting incidents and/or violations of legal requirements to the competent authority do not work properly.

4.3.2 Evaluation of continual improvement (ISO 17021-1 section 9.4.8.3/ISO 50003 sections 5.6, 5.7, 5.8 and 5.9)

According to ISO 50003 section 5.6, the audit report must contain a statement (with audit evidence) regarding the achievement of continuous improvement of the EnMS and the improvement of the energy performance.
The following points are important to consider in evaluating whether the energy management system has been implemented such that the organization is capable of continually improving its energy performance:

→ The CB must evaluate whether the various elements of the ISO 50001 standard that are important for achieving continual improvement have been implemented in such a way that the preconditions for the improvement process are in place. These elements include identifying and updating opportunities for improvement, involvement of top management in continual improvement, planning improvements and the availability of resources and people, following and if necessary modifying the improvement processes;
→ The CB must evaluate the working of the improvement process through a combination of audit trails in which all the steps relevant for making improvements for one or more identified opportunities, and from spot checks evaluating how particular options for improvement are carried out;
→ If the energy management system is functioning properly, the results of the system will show to what degree the energy performances are improving. This is then documented within the energy management system.

One or more of the following situations can be grounds for a refusal to grant or withdraw a certificate:

→ The organization has not gained, or has very little, understanding of the opportunities for improving its energy performance related to the identified risks and opportunities for improvement.
→ There is no plan for improvement, or the plan is not well founded with respect to content[2].
→ The plans are not carried out and no convincing explanations are provided. This refers to the energy management programmes which include concrete plans for activities as part of the continual improvement process.

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[1] Before a certificate is withdrawn, the certification body shall allow the organization concerned a period during which it can repair the nonconformity. The duration of this period depends on the nature of the nonconformity. This period can be considered a suspension if the certification body determines that the certificate must not be used and/or that the certified organization must notify its clients of the nonconformities. If the non-compliances have been repaired within the stated period, the suspension is terminated. If not, the certificate is withdrawn.

[2] The evaluation of this part is subjective. Considerations are:
→ The improvement of energy performance is best evaluated over a number of years.
→ If an organization has significantly improved its energy performance in the recent past, the CB should take this into consideration.
→ If an organization has planned and/or undertaken very little action to improve its energy performance, while there have been improvements in technology that many of its competitors have used, the plan is probably not well grounded.
→ The exchange of experiences between CBs will be encouraged, as it is important they come to similar conclusions.

4.3.3 Evaluation of energy information

The certification audit must focus on the processes related to monitoring and measurements, and how this information is converted into energy information. Although the certification process is not focused on making pronouncements about individual figures, it does mean that:

→ during the certification audit, random checks will be performed for a number of important risks to evaluate whether the measuring and recording system produces valid and reliable results;
→ for a number of issues, the procedure for processing the measurements and records, and if appropriate, how they are adapted into energy information, will be evaluated;
→ there will be an evaluation of whether the information communicated internally and externally (including reports to the government) agrees with the information obtained in the energy management system;
→ it is verified that the system works in such a way that the results are reproducible and that the energy information can be compared to previous and/or future periods.

An ISO 50001 certificate means that various elements of the system have been assessed that are important for generating reliable energy information. In this sense, it gives a positive value to the information generated using the energy management system. However, an ISO 50001 certificate is not a value judgement about the reliability of individual figures, since these are only assessed using spot checks, with the aim of evaluating the system.
An organization that creates an incorrect image by providing incomplete or incorrect energy information in its external communications is not meeting the requirements of ISO 50001 with regard to communication.

4.3.4 Procedures for violations

In the Netherlands, article 2.11 of the Environmental Activities Degree of the Environment and Planning Act is relevant as it establishes 'duty of care'. This implies that an entity will do all that can reasonably be expected.

The CB/auditor may be expected to:

→ report violations of legislation and regulations to the top management;
→ suspend or withdraw certification if the energy management system does not result in violations being prevented or being resolved.
This action should be considered reasonable.

The company must decide whether or not to report the violation to government authorities on a case-by-case basis.

4.3.5 Audit reports (ISO 17021-1 section 9.4.8/ISO 50003 section 5.6)

A CB must report the results of the certification audit to the organization to be certified, and in doing so must formulate opportunities for improvement. This is not considered a recommendation to be paid for separately.
The CB is not permitted to make recommendations for altering the energy management system and/or to make suggestions for concrete solutions based on the results of this report.

According to SCCM, the report must include sufficient information after the fact to account for its procedures, for example if there are any objections/appeals. The CB must maintain records with information about the audits performed (see ISO 17021-1 section 9.6.8).

On the basis of ISO 50003 section 5.6, the scope and boundaries of the energy management system must be included in the audit report.

ISO 17021 sec. 9.4.8.3 a requires that the audit report contain a statement with a summary of the evidence showing the degree to which the energy management system is capable of meeting the applicable requirements and achieving the intended outcomes. 'Outcomes' is understood to mean the intended results that, are – at a minimum – aimed at improving energy performance, compliance with legal and other requirements and achieving the energy objectives. This is in line with the requirements of ISO 50003 section 5.6, which requires a statement (with evidence) on the continuous improvement of the energy management system and energy performance. According to SCCM, this statement should focus on achieving the intended results and the functioning of the elements of the energy management system that are relevant for ensuring compliance requirements and ensuring an improvement in energy performance.
Besides the points above, the report about surveillance audits must pay special attention to the implementation of plans for rectifying nonconformities identified in previous audits.

According to SCCM, in the event of combined systems, the assessment of the energy management system based on the ISO 50001 standard must be readable on its own in the report. The result of the application for a certificate for one management system must not affect the result for any other part.

4.4 Maintaining certification (ISO 17021-1 section 9.6)

4.4.1 Surveillance audit (ISO 17021-1 section 9.6.2/ISO 50003 paragraaf 5.8)

SCCM expects that the following points will be given attention in a surveillance audit, in addition to the elements required by ISO 17021-1 and ISO 50003:
→ the involvement of top management;
→ the functioning of procedures related to the communications with interested third parties (including correspondence with government authorities);
→ the functioning of processes for the organization's assessment of its own compliance with legislation and regulations, and the outcomes of these procedures;

Surveillance audits can be combined with audits of other management systems. However, this must not jeopardize the quality and depth of the audit. In a combined audit, the report must clearly indicate all the aspects relevant to the energy management system.

4.4.2 Special audits (ISO 17021 section 9.6.4)

A CB must consider an additional (interim) audit during the audit cycle if:
→ the CB is informed of decisions made by the competent authority related to enforcement (formulated in an official letter) in which the government has identified a violation of important energy regulations;
→ there are other signs that give the CB reason to doubt that energy management system is functioning properly.

An interim audit does not always have to be performed at the site of the certified organization. The CB can sometimes make a judgement by requesting the relevant information.

ANNEX I

Documents available for certification

Italic: different from ISO 14001:2015

The organization must have and keep the following documents/records available (for a period of three years for recertification):

→ Description of the scope (4.3)
→ Energy policy (5.2)
→ Energy objectives *and energy targets* (6.2.2)
→ *Action plans (6.2.3)*
→ *Methods and criteria used in energy review (6.3)*
→ *Results of energy review (6.3)*
→ *Method for determining and updating EnPIs (6.4)*
→ *EnPI values (6.4)*
→ *Information of EnBs, relevant variable data and adjustments (6.5)*
→ *Information on (6.6):*
  a the relevant variables for significant energy use;
  b energy consumption related to significant energy use and to the organization;
  c operational criteria related to significant energy use;
  d static factors, if applicable;
  e data specified in action plans.
→ *Information on measurement, monitoring and other means of establishing accuracy and repeatability (6.6)*
→ Evidence of competences (7.2)
→ *Suggested improvements (7.4) – documentation should be considered*
→ Processes for operational planning and control (8.1)*
→ *Design activities related to energy performance (8.2)*
→ *Investigation for deviations in energy performance. Results of the investigation and response (9.1.1)*
→ *Results monitoring and measurement (9.1.1)*
→ Results of the evaluation of compliance (9.1.2)
→ Internal audit programme and results of internal audits (9.2.2)
→ Results of management review (9.3.4)
→ Nature of nonconformities and actions taken. Results of any corrective action (10.1)

Documents/records SCCM recommends be available:

→ Results of the context analysis (see 4.1 and 4.2)
→ Description of the organization and responsibilities
→ *Risks and opportunities that require attention (6.1.1)*
→ *Processes for addressing risks and opportunities in 6.1.1-6.1.4 (6.1.1)**
→ *Overview legal and other obligations and requirements that follow for the organization (4.1)*
→ *Planning for collection of energy data (also called monitoring plan) (6.6)*
→ *Evidence of communication activities (7.4.1)*
→ Overview of documented information and records (including any descriptions of processes/procedures other than those more or less required on the basis of 8,1)

* The documented information must be retained and updated to the extent necessary to create confidence that the processes have been implemented as planned.

ANNEX 2

Explanatory diagrams regarding the energy management system

FIGURE 1: RELATIONSHIP OF CONTEXT ANALYSIS, ENERGY USE AND CONSUMPTION, RISKS ETC. / OPERATIONAL AND STRATEGIC IMPROVEMENT CYCLE

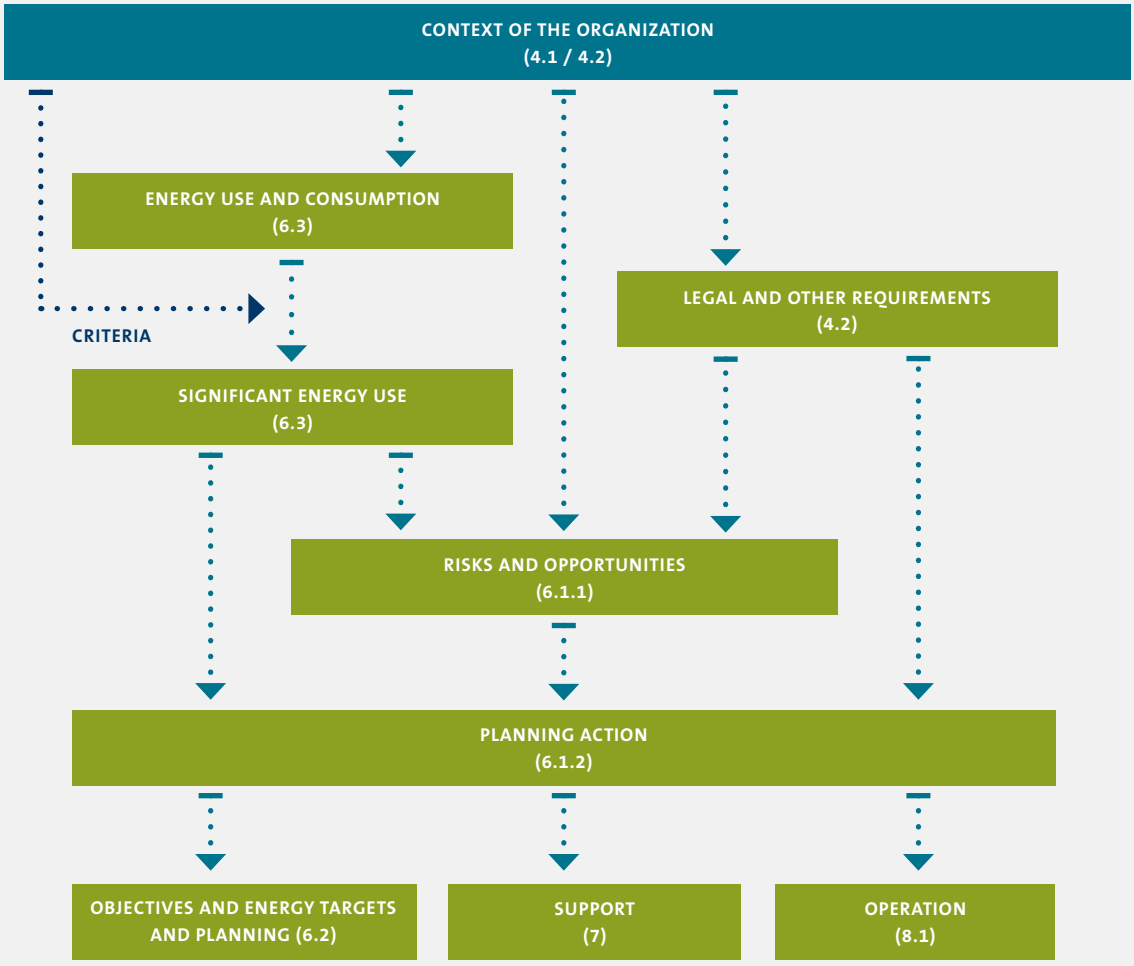


FIGURE 2: RELATIONSHIP OF ELEMENTS OF THE STANDARD RELEVANT FOR COMPLIANCE MANAGEMENT

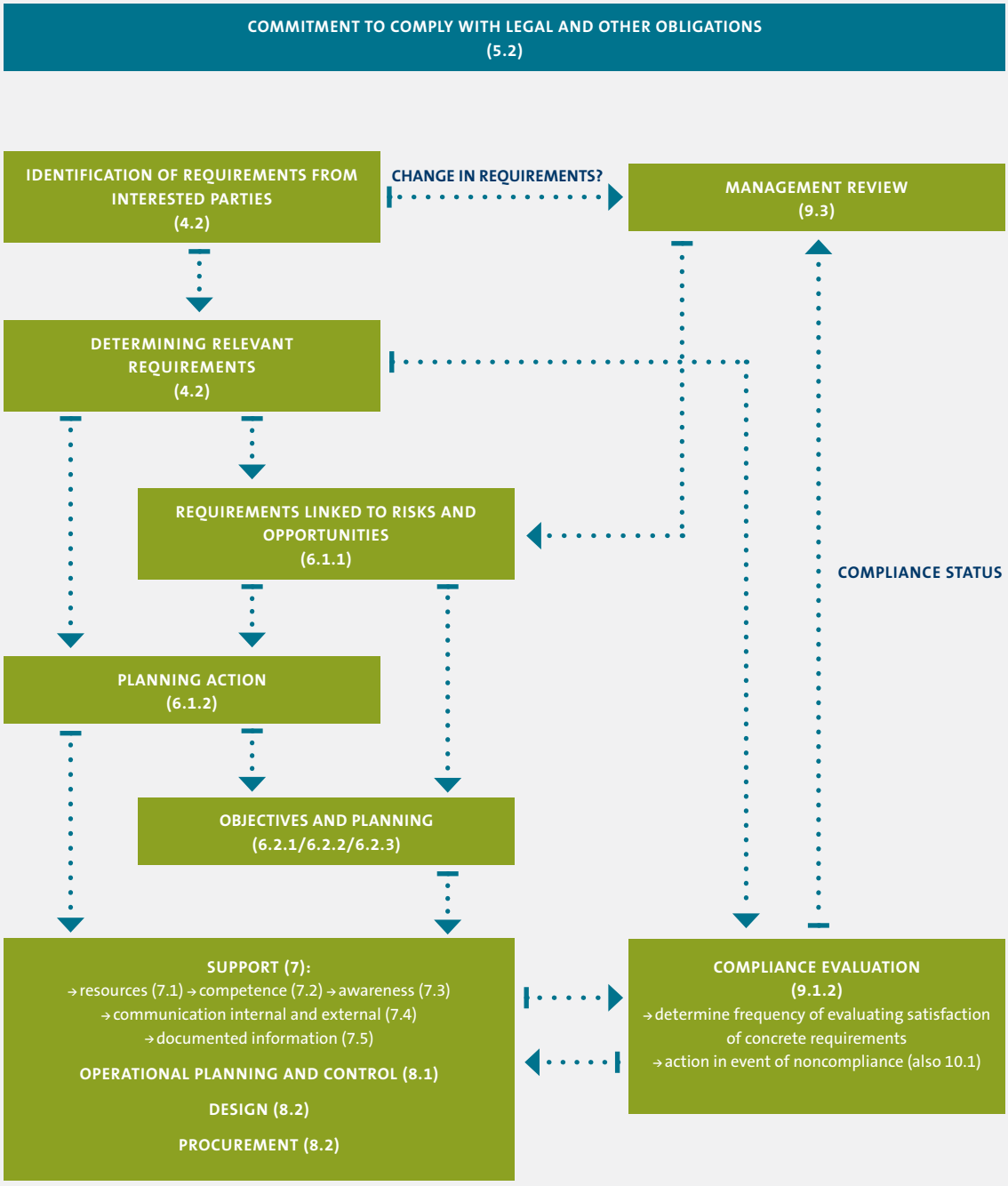
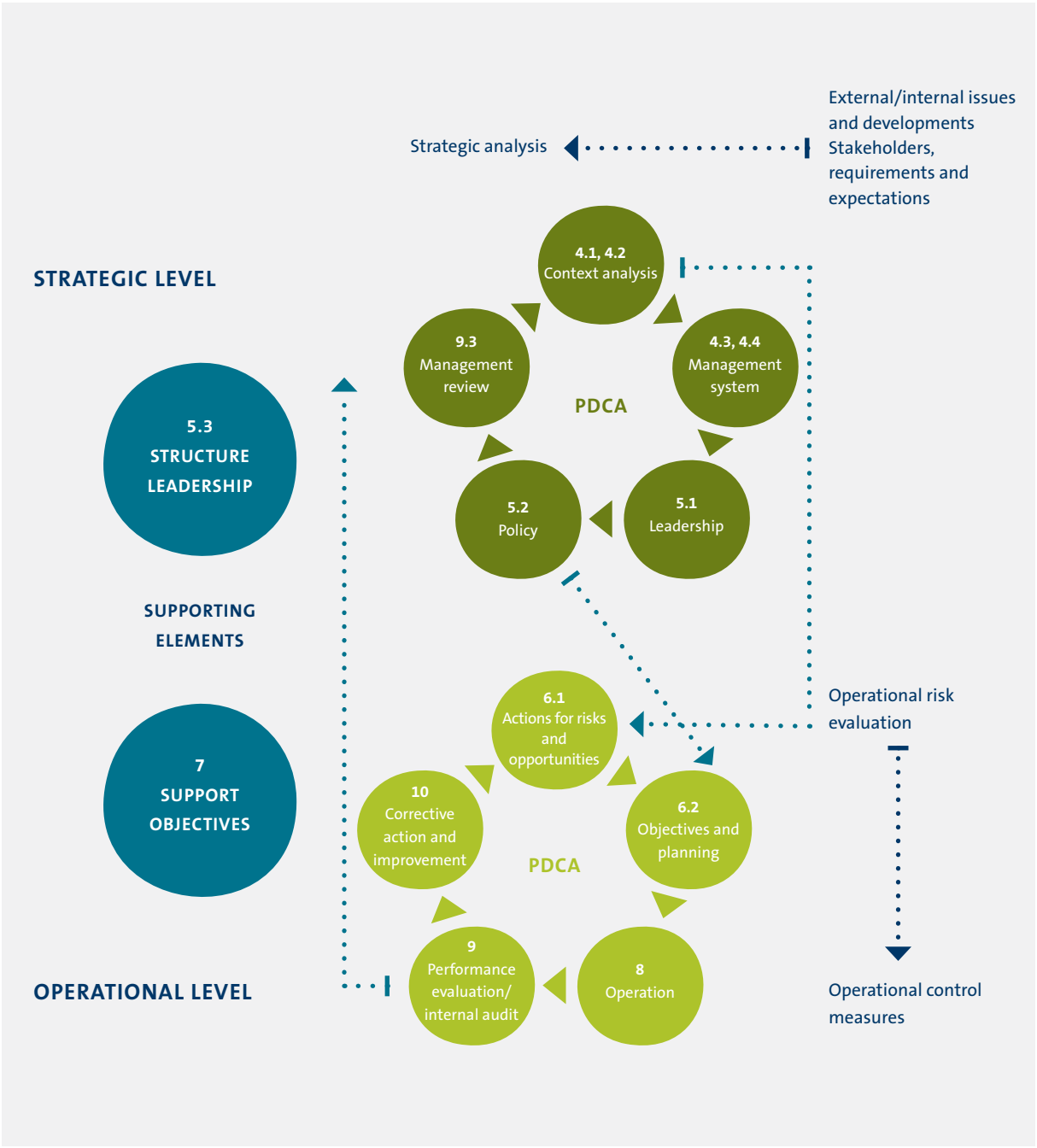


FIGURE 3: PDCA CYCLE AT STRATEGIC AND OPERATIONAL LEVEL (SOURCE: NEN)



ANNEX 3

Knowledge of energy-related legislation and regulations in the Netherlands

Table 1 shows the legislation and regulations relevant to energy management, that can apply to organizations with offices in the Netherlands. Summaries of all the legislation and regulations in the list can be found on mijn.sccm.nl. These summaries give an indication of the depth of knowledge auditors must have. It is assumed that auditors know the essence of the legislation and regulations (aim, for whom, what criteria apply, main implications).

ANNEX 3, TABLE 1: LEGISLATION AND REGULATIONS RELEVANT TO ISO 50001 IN THE NETHERLANDS

SUBJECT	LEGISLATIONS AND REGULATIONS RELEVANT TO AUDITORS
General	→ Environment and Planning Act including requirements for energy saving, the energy information duty and the energy investigation duty → Industrial Emissions Guideline (RIE)/BBT conclusions and BREF 's for RIE companies → E-PRTR → EED (Energy Efficiency Directive)
Reporting	→ Report formats published on the RVO website

Table 1 lists the main legislation and regulations relevant to ISO 50001 certification in the Netherlands. However, this is only a portion of the body of legislation and regulations. It is the responsibility of the CB to evaluate whether, in addition to the legislation and regulations in table 1 there are other legislation or regulations which could affect companies working in the technical areas for which accreditation is being requested. For transport, for example, there may be requirements in the Commodities Act with regard to the engines used, and there is specific legislation for the shipping industry. This may also be the case for other industries.

ANNEX 4

Use of the ISO 50001 certification scheme abroad

In theory, the substance of the ISO 50001 certification scheme is the same regardless of an organization's place of business. Thus, the interpretation of the ISO 50001 standard, as well as the organization of the CB and the procedures it uses, are the same worldwide. Exceptions to this are:

→ interpretations and procedures designed for specifically Dutch situations;
→ points for attention in the organization and procedures having to do with their familiarity with and conditions in the other country/countries.

The following points may be modified (the numbers refer to the section numbers in this certification scheme).

General

→ If local translations of the ISO 50001 are used, the English version of the ISO 50001 text shall be binding.
→ The certification scheme uses the term 'environmental permits'. If there is no permit system, the term should be understood as the system used in the country involved to lay down specific government requirements.
→ Insofar as procedures for notifying government authorities of non-compliance are necessary, the CB must make its evaluation in the light of prevailing local conditions. It is essential that the organization be able to demonstrate that sufficient corrective action has been taken to repair and prevent further non-compliance.
→ If adequate legislation and regulations are lacking in the country in question, the organization will have to base objectives and targets on, among other things, the technological options available. These can be derived from any available international guidelines for current technologies. Another possible frame of reference is the usual standard for comparable organizations in the country concerned and, if the organization belongs to an international concern, the usual practice within that concern.

Organization of the certification body

→ 3.3.1: In determining the CB's competency, the specific requirements for certification abroad with regard to language, knowledge of local legislation/regulations and the country's energy policy must be kept in mind. The contract review will provide specific requirements.
→ 3.3.1: Members of the audit team must have excellent written and spoken command of the primary language used in the organization. In addition, one member of the audit team must have excellent written and spoken command of the language used on the work floor. If necessary, interpreters may be used.
→ 3.3.1: At least one member of the audit team must be thoroughly acquainted with the relevant local legislation and regulations for the sector concerned and the national energy policy related to it.

Procedures used by the certification body

→ 4.3.1: Although the audit of compliance with legislative and regulatory requirements and consulting of public sources of information will depend on local conditions, the basic principles and procedures shall still apply.

→ 4.3.1: The CB's task is to evaluate the functioning of the mechanisms for improvement within the energy management system. The level of energy performance and/or objectives is the responsibility of the organization itself. In many countries, this level is safeguarded by legislation and regulations and their enforcement. In countries lacking adequate legislation and regulations the organization itself will have a greater responsibility. In this situation, the issuing of an ISO 50001 certificate can carry extra risks for a CB. There are situations conceivable in which a company's energy performance is such that a CB will not want its name connected with the company. A CB may set a minimum level for itself, regarding an organization's level of energy performances and/or objectives.

ANNEX 5

Additional information

Information from SCCM

The SCCM website (www.sccm.nl) has more information including documents (downloadable), some in English, about various subjects including:

→ background information about certification;
→ benefits and added value of ISO 50001 certification;
→ information leaflets (with explanation of implementation of elements of the management system);
→ list of certified companies (can be searched for in a database);
→ list of affiliated certification bodies;
→ case studies with questions and answers used at the auditor 'harmonization' meetings;
→ background of the foundation and a list of names of the organizations and persons involved;
→ brochures from SCCM.

Information from third parties

Information about some subjects mentioned in the ISO 50001 certification scheme is available from the parties below.

→ Best available technologies	Rijksdienst voor Ondernemend Nederland (www.rvo.nl)
→ Accreditation	Council for Accreditation (www.rva.nl)
	European co-operation for Accreditation (https://european-accreditation.org)

The standards mentioned in this certification scheme can be ordered from NEN (Nederlands Normalisatie Instituut) in Delft, +31 (0)15-2690391 or www.nen.nl. The mentioned EA/IAF guidelines can be downloaded via the website of SCCM or the European co-operation for Accreditation.

Contact

Please do not hesitate to contact us if you have any questions. We will gladly help companies, organizations, consultants, supervisory bodies, certification bodies and other stakeholders.

Mijn.sccm is the knowledge platform for ISO 14001, ISO 50001 and ISO 45001.
On mijn.sccm, you'll find a wealth of information including summaries of the most relevant (Dutch) environmental and OHS legislation and regulations, and semi-annual overviews of updates to legislation and regulations (all summaries in Dutch). Click on mijn.sccm.nl and sign up!

Stichting Coördinatie Certificatie Managementsystemen voor milieu en gezond en veilig werken (SCCM)

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