



BUSINESS ASSURANCE

GUIDANCE FOR THE TRANSITION FROM ISO 50001:2011 TO ISO 50001:2018

ABOUT THIS DOCUMENT

The purpose of this document is to provide some useful insights on the transitioning to ISO 50001:2018. It provides information related to the contents and clause structure of the revised standard, the transition timeline and key dates and the requirements for the transition, as well as explaining how DNV GL can support you to ensure a smooth transition.



Background for the development of energy management system standards

Systematic energy management is currently used worldwide in thousands of organizations. ISO 50001 helps organizations to identify where they have energy saving potential and to manage and improve their energy performance.

Energy management system (EnMS) standards have been around for 15-20 years. The first EnMS standards were country specific standards such as the American ANSI/MSE 2000 (2000), Danish DS 24301 (2001), Swedish SS627750 (2003), and the Irish I.S. 393 (2005). On European level, EN 16001 was released in 2009, while ISO released the first edition of ISO 50001 in 2011. When ISO 50001 was released, this triggered withdrawal of



EN 16001 and several country specific standards. Since its first launch, ISO 50001 has become the most recognized and widely used EnMS standard globally. It is also referenced by several national legislators and an instrument for national incentive schemes to reduce energy consumption and enhance effective energy use.

An estimate of 25000 organizations are currently certified worldwide. Numbers reported by ISO at the end of 2016 showed that Germany is the country with the highest number of ISO 50001 certified organizations with approximately 50% of the certificates. Other major countries are UK, Italy, China, France and India.

Energy use and consumption - a key global challenge

Energy use and consumption is one of the most critical challenges facing nations, the international community and energy intensive organizations.

On national and international level, energy is of strategic importance from an economical and security perspective. In addition, high level forums are working globally to advance clean energy as a key tool for climate action.

In the bigger picture, the world energy consumption is on the rise. It has more than doubled in the last 40 years and is projected to increase by up to 30 % by 2030. Energy production and use account for roughly two thirds¹ of the world's greenhouse gas (GHG) emissions, which are the likely predominant cause of climate change. Reducing our energy consumption is one of the surest ways of lowering GHG emissions, thus reducing our impact on the climate while sustaining the growth of the world economy and boosting energy se-



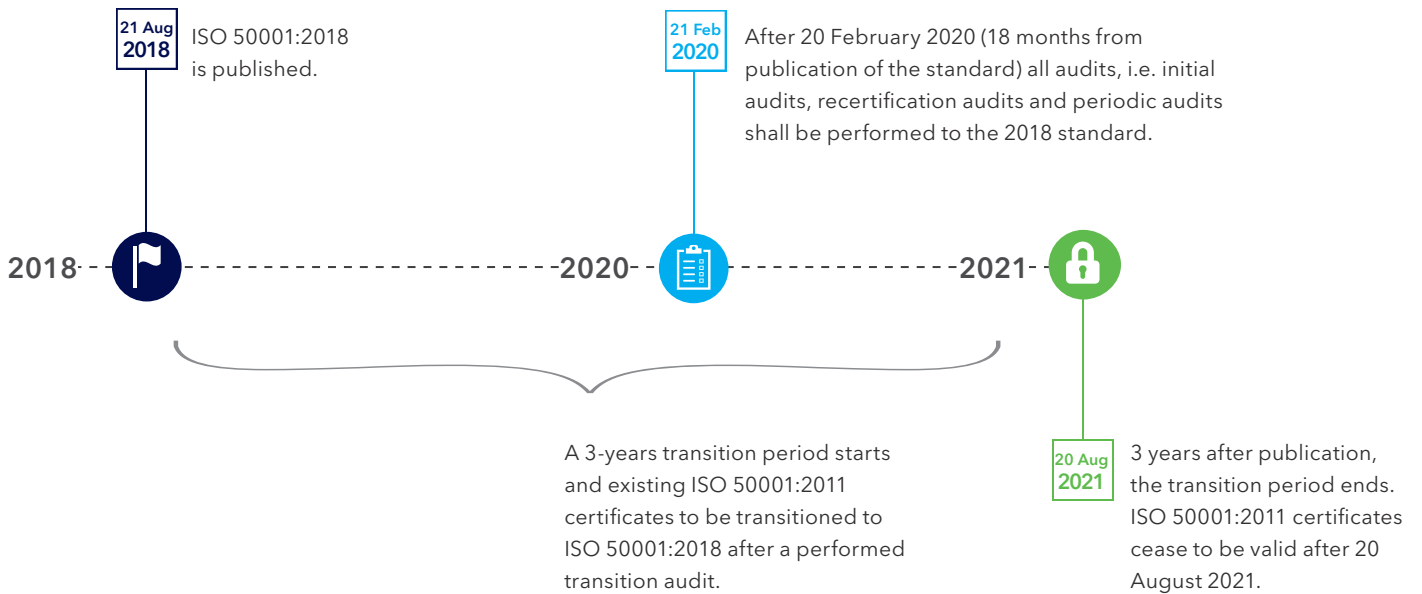
curity for all. In addition, it helps save money. The development and deployment of cleaner energy technologies and policies for new and renewable energy sources will help. However, this switch is a longer-term objective and will take time to be implemented.

Individual organizations therefore have a very important role to play in achieving future sustainability through effective energy management and improved energy performance.

Implementation of ISO 50001 transforms the way organizations manage their energy, offering companies a comprehensive approach to continually improve energy performance, sustainability and their bottom line. The experience is that ISO 50001 is acknowledged by users to support improved energy performance. It is also increasingly acknowledged by authorities and regulators as a mean of achieving energy savings and thus reducing greenhouse gas emissions.

¹ International Energy Agency (IEA), Energy and Climate Change: World Energy Outlook, Special report, 2015.

Transition timeline



Transition from ISO 50001:2011 to ISO 50001:2018

THE DEVELOPMENT OF ISO 50001:2018

After seven years of existence, ISO 50001 is being updated to ensure it remains a useful tool for all types of businesses and organizations around the world.

As for ISO 50001:2011, the 2018 edition is intended to be applicable to any organization regardless of size, type, and activity. The revision process started in 2014 under the management of ISO/TC242 Energy management systems. The secretariat was shared between standard institutes of USA and China.

The main objectives and scope of the revision as stated in the design specifications were:

- Adapt the High Level Structure to ensure compatibility with other ISO Management System standards.
- Ensure that core concepts of 2011-edition are retained, such as:
 - continual improvement of energy performance.
 - focus throughout standard to improve energy efficiency, energy consumption and energy use.
 - include the necessary energy specific topics related to energy performance such as energy data, monitoring, measurement, analysis and evaluation.

With this scope of work, the result is that the energy specific changes are moderate.

REQUIREMENTS FOR THE TRANSITION

A resolution from the International Accreditation Forum (IAF) states that:

- 3 years after publication date of ISO 50001:2018, all certificates shall be transitioned to the new standard to ensure continued validity. After this date certificates to the 2011-edition cease to be valid.
- DNV GL (and other certification bodies) shall cease conducting audits, including initial, periodic audits and recertification to the ISO 50001:2011, 18 months from the date of publication of the revised standard. This may imply that the transition period for your organization can be considerably shorter than the

max. 3 years for transition. Therefore implementation of the new requirements must be planned accordingly.

To transfer your ISO 50001:2011 certificate to the new edition, DNV GL needs to perform a transition audit as the basis for recommending certification to the new standard. The transition audit can be done during a scheduled periodic or recertification audit or during a special "off-cycle" audit, in agreement with your organization.

DNV GL can only issue accredited certifications to ISO 50001:2018 after obtaining the needed accreditation to deliver certification to the revised standard and after your organization has demonstrated to conform to the revised standard. The transition audit will normally imply a need for some additional time to evaluate compliance with the new or revised requirements in the new edition.

WHAT YOU SHOULD DO

For any organization, the degree of necessary changes will depend on the maturity and effectiveness of the current management system and on the organizational structure and practices.





Organizations using ISO 50001:2011 are recommended to do the following:

- 1 Familiarize yourself to ISO 50001:2018.
- 2 Perform gap analysis to identify the differences that need to be addressed to ensure your EnMS meets all new and revised requirements.
- 3 Based on the results of the gap analysis, develop an implementation plan.
- 4 Provide appropriate training for all individuals involved in implementing ISO 50001.
- 5 Modify the existing EnMS to meet the new requirements and ensure proper implementation in your organization. It is recommended that you conduct an internal audit to check effective implementation.

How can DNV GL support your transition?

For proper planning and scheduling of a transition audit it is beneficial that this is agreed as early as possible between your organization and DNV GL.

During the transition period, we can help by providing a number of services delivered to you by the local staff you already know:

	<ul style="list-style-type: none"> ■ AWARENESS SESSIONS: Seminars, webinars and e-learnings where you typically learn about the revisions and obtain a basic overview of the content and key changes in the standards, the transition process etc.
	<ul style="list-style-type: none"> ■ TUTORED TRAINING COURSES, IN-COMPANY OR PUBLIC: These are interactive courses where the objective is to provide deeper insight into the changes and the required steps for transition. These are modular courses where the level of detail can be tailored to your needs.
	<ul style="list-style-type: none"> ■ WORKSHOP WITH YOUR MANAGEMENT TEAM AND/OR OTHER KEY RESOURCES: To build knowledge and understanding of the changes and how they impact the existing management systems. The focus can be tailored to your needs.
	<ul style="list-style-type: none"> ■ GAP ANALYSIS: Assessment of your management system against the requirements of the new standard to identify the gaps that need to be addressed. This will provide useful input both on your readiness to comply with the revised standard and to your process for ensuring such compliance. The level of detail of such assessments can be tailored to your needs.

If you have question, please do not hesitate to get in touch with your regular DNV GL contact or the local DNV GL - Business Assurance unit.

The structure and contents of ISO 50001:2018

ISO 50001:2018 is using ISO's common framework for management system standards containing a unified High Level structure (HLS) and common text and terminology. This will ensure improved alignment and compatibility with other ISO standards such as ISO 14001 and ISO 9001.

The clause structure of ISO 50001:2018 is shown below. Clauses in black text are induced by the common HLS, while clauses in blue are additional clauses specific for ISO 50001:

	<ul style="list-style-type: none"> 1. Scope 2. Normative references 3. Terms and definitions 4. Context of the organization
	<ul style="list-style-type: none"> 4.1. Understanding the organization and its context 4.2. Understanding the needs and expectations of interested parties 4.3. Determining the scope of the energy management system 4.4. Energy management system
	<ul style="list-style-type: none"> 5. Leadership
	<ul style="list-style-type: none"> 5.1. Leadership and commitment 5.2. Environmental policy 5.3. Organization roles, responsibilities and authorities
	<ul style="list-style-type: none"> 6. Planning
	<ul style="list-style-type: none"> 6.1. Actions to address risks and opportunities 6.2. Objectives, energy targets and planning to achieve them 6.3. Energy review 6.4. Energy performance indicators 6.5. Energy baseline 6.6. Planning for collection of energy data

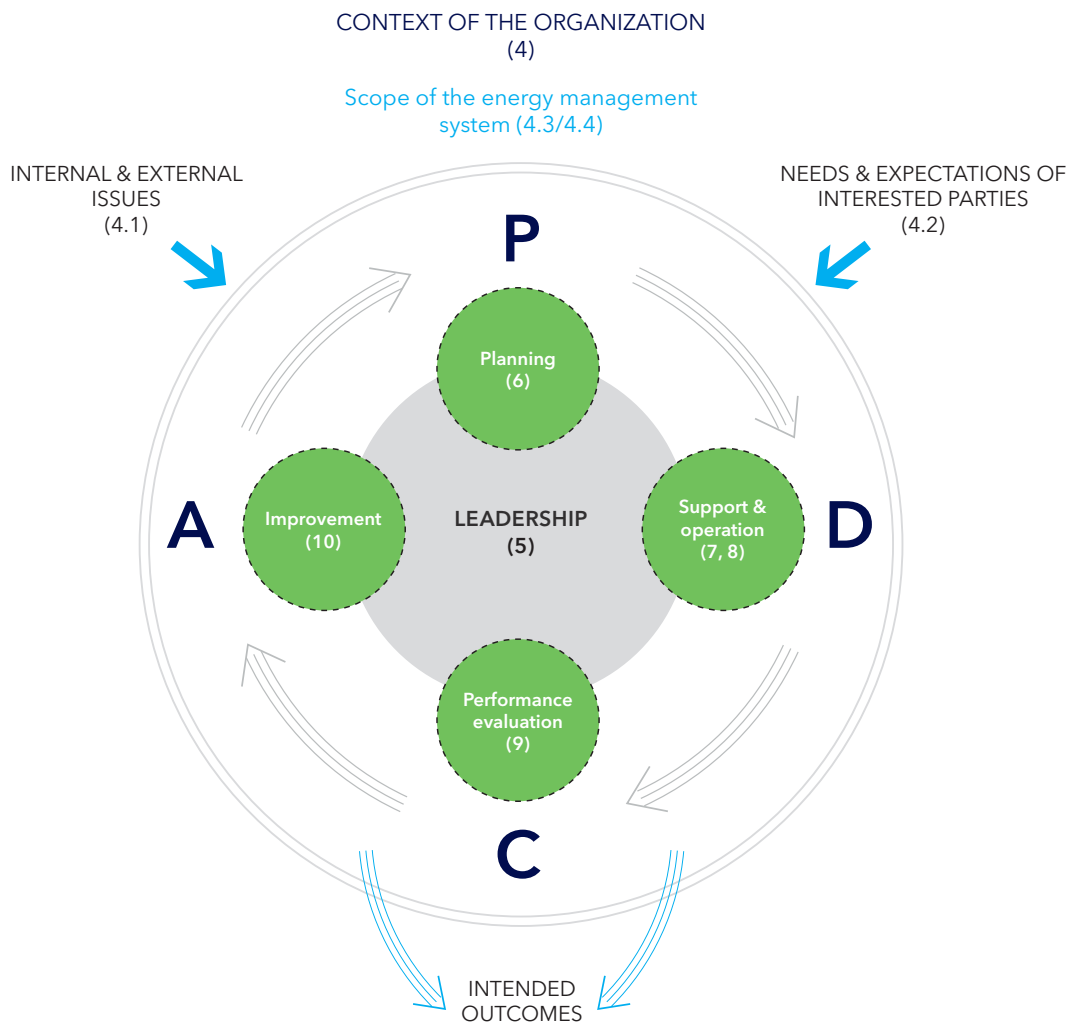


	7. Support
	7.1. Resources 7.2. Competence 7.3. Awareness 7.4. Communication 7.5. Documented information 7.5.1. General 7.5.2. Creating and updating 7.5.3. Control of documented information
	8. Operation
	8.1. Operational planning and control 8.2. Design 8.3. Procurement
	9. Performance evaluation
	9.1. Monitoring, measurement, analysis and evaluation of energy performance and the EnMS 9.1.1. General 9.1.2. Evaluation of compliance with legal requirements and other requirements 9.2. Internal audit 9.3. Management review
	10. Improvement
	10.1. Nonconformity and corrective action 10.2. Continual improvement

The most extensive additional energy specific requirements to the common HLS requirements are those added in chapter 6.3-6.6, 8.2, 8.3 and 9.1.

An organization is of course not required to structure its management system according to this structure. The purpose of the new structure is to provide a clear presentation of the requirements, it is not the intention to be a model for documenting your management system.

ISO 50001 incorporates the Plan-Do-Check-Act approach



Key changes of ISO 50001:2018 compared with ISO 50001:2011 is described by DNV GL in a separate document. Contact your local DNV GL office for information.

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DNV GL - Business Assurance

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DNV GL is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. With origins stretching back to 1864 and operations in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.

As one of the world's leading certification bodies, we help businesses assure the performance of their organizations, products, people, facilities and supply chains through certification, verification, assessment and training services. Partnering with our customers, we build sustainable business performance and create stakeholder trust across all types of industries.