

EMAS - Factsheet

The links between EMAS and energy management according to EN 16001

Why choose a systematic approach to improve your organisation's energy performance?

The European Union has set itself a target for 2020 of saving 20% of its primary energy consumption compared to business-as-usual; in order to reduce the amount of greenhouse gas emissions and tackle climate change. Companies (and other organisations) play a crucial role in achieving a low-carbon economy. An ambitious approach towards energy efficiency and energy savings creates financial benefits for companies as well¹. Energy efficiency directly results in lower energy bills. Cost savings, in turn, help strengthen a company's competitive advantage in the market. By changing certain production processes, energy savings of 30% and even up to 65% can be obtained². Management systems are well equipped to help organisations improve their energy efficiency and achieve significant energy savings.

What are the main features of EN 16001?

The energy management standard EN 16001 represents the latest best practice in energy management and is based on existing national standards and initiatives to improve energy efficiency³. EN 16001 provides the requirements for establishing, implementing, maintaining and improving an energy management system. The standard helps organisations adopt a policy, identify significant areas of energy consumption and target reductions.

Is EMAS compatible with EN 16001 vice versa?

EMAS already includes various provisions on energy (see examples in [Table 1](#)). The scheme is well equipped to help registered organisations increase their energy efficiency and reduce the amount of energy used. The financial benefit cited most frequently by respondents of a study on EMAS benefits and costs was linked to reductions in energy use and more efficient resource use. The study found evidence that annual energy savings alone exceeded the annual costs of maintaining EMAS.

Table 1: Energy as a core element of EMAS

EMAS core elements	Examples of energy being addressed
Environmental policy	Energy as an environmental aspect
Environmental review	Review of data on energy inputs
Environmental management system	Energy efficiency as an environmental core indicator to be measured
Environmental audit	Energy situation in the focus
Environmental statement	Reporting on energy efficiency core indicator

In addition to their topical congruency, EMAS and EN 16001 also share similar structural features. The structure of the environmental management standard ISO 14001 serves as the basis for both EN 16001 and EMAS (the ISO 14001 requirements are an integral part of EMAS). They follow the typical "Plan-Do-Check-Act Cycle". Hence, EN 16001 can be easily integrated into the existing environmental management system according to EMAS or vice versa (see [Figure 1](#)).

¹ Energy efficiency means "using less energy inputs while maintaining an equivalent level of economic activity or service". Energy savings is a broader concept and also "includes consumption reduction through behavior change or decreased economic activity". COM (2011)109 final: Communication from the Commission: Energy Efficiency Plan 2011.

² SEC (2011) 277 final: Impact assessment accompanying the Energy Efficiency Plan 2011.

³ 'EN 16001 Energy management systems - Requirements with guidance for use', published by the European Committee for Standardisation (CEN) in 2009.

Which types of organisation will benefit most from EN 16001?

EN 16001 can be adopted by organisations of any size, type and sector that seek to improve their energy performance and aim to show their commitment to their stakeholders. However, EN 16001 is of special interest for companies that:

- Are involved in energy-intensive activities with big energy as well as cost-savings potentials;
- Aim to receive public financial support such as energy tax exemptions;
- Are covered under the EU Emissions Trading System;
- Are already EMAS or ISO 14001 registered/certified;
- Operate internationally, since EN 16001 provides a good basis for international requirements regarding energy management such as ISO 50001.

What are the joint EMAS and EN 16001 benefits?

Systematic management approach

- Objectives are implemented in a systematic manner and can be assessed in every phase
- Improved operational and organisational structures
- Synergies and reduced amount of personal and financial resources when integrating an energy management system into the already existing management system(s)

Competitive advantage

- Energy savings & cost reductions
- Improved reputation and relations with stakeholders through contribution to climate protection

Risk management

- Regulatory compliance
- Climate protection public policies are anticipated

Where does EMAS go beyond EN 16001?

EMAS goes beyond EN 16001 in several aspects. For example, while EMAS is a comprehensive environmental management approach covering various environmental aspects such as energy, emissions or water, EN 16001 considers solely energy aspects. Additionally, EN 16001 only requires internal communication measures with employees. Communication with external stakeholders through an environmental statement is not a requirement of EN 16001.

Which additional EN 16001 implementation steps do EMAS registered organisations have to take?

EMAS covers the majority of EN 16001 requirements (provided energy consumption is identified as a significant environmental aspect). EMAS registered organisations only need to take some small additional steps to meet the EN 16001 requirements (Table 2). They mainly relate to the specific inclusion of energy efficiency and energy consumption related topics in the general environmental management and some structural adaptations.

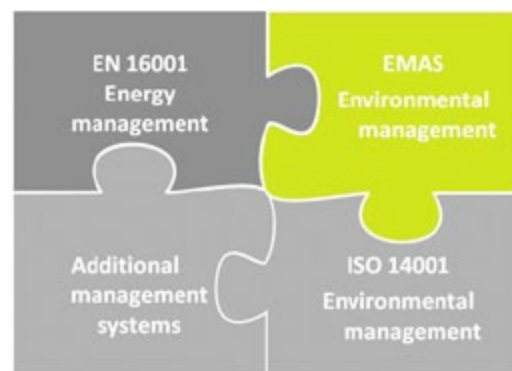


Figure 1: EMAS and EN 16001 can be consolidated*

Table 2: Main additional EN 16001 implementation steps for EMAS registered organisations (when energy consumption is a significant environmental aspect)⁴

EMAS III	Additional aspects to meet EN 16001 requirements
Requirements for an Environmental Management System (EMAS III, Annex II)	
A3	Planning (including energy efficiency considerations into the planning of objectives, targets and programmes. This is made up of the following sub elements).
A.3.1/B.1.	Considering energy consumption when evaluating significance of aspects according to scale, number, etc.
Environmental aspects/ Environmental review	Estimation of expected energy consumption.
	Identification of all persons whose tasks can potentially cause significant change to energy consumption.
A.3.3/B.3	Allocation of means and specification of a time frame for achievement of targets in the planning.
Objectives, targets and programme(s)/ Environmental performance	
A4	Implementation and operation
A.4.2/B.4.	Providing proof of qualification and competence of energy manager.
Competence, training and awareness/ Employee involvement	
A.4.5	Determination of storage time for relevant documents.
Control of documents	
A5	Checking (Monitoring & Measurement)
A.5.1	Determination of energy consumption and associated energy factors; assessment of actual vs. expected energy consumption at pre-defined intervals.
Monitoring and measurement	Maintaining of records of significant unplanned deviations from expected energy consumption.
	Reviewing and revision of relationship between energy consumption and energy factors at defined intervals.
	Comparison of energy performance indicators with those of similar organisations.
A6	Management review
	Adding special statements on energy when reviewing energy aspects and energy policy.
	Adding special statements on energy in the management review.

Implementation of EN 16001 is easy for EMAS registered organisations

Since EMAS goes beyond ISO 14001, EMAS registered organisations need to meet fewer additional requirements when introducing EN 16001. In fact, EMAS registered organisations already meet most of the requirements of an energy management system according to EN 16001. Hence, energy issues can be approached as an integral part of EMAS. Where necessary, organisations can use the existing organisational and operational structures set up within EMAS to implement an energy management system according to EN 16001. In turn, an energy management based on EN 16001 provides an excellent basis for the implementation of EMAS.

Additional information:

- The German Federal Ministry for the Environment has published the guide 'DIN EN 16001: Energy Management Systems in Practice'. The guide supports organisations in the implementation of an energy management system and highlights differences and similarities between EN 16001 and EMAS/ISO 14001. The guide is available for download on the EU EMAS Helpdesk [website](#).
- The Office of the German EMAS Advisory Board has carried out an in-depth analysis of the differences and similarities between EN 16001 and EMAS. The analysis is available for download on the EU EMAS Helpdesk [website](#).
- Practical information on EMAS and resource efficiency is given in the fact sheet 'EMAS boosts resource efficiency', which is available on the EU EMAS Helpdesk [website](#).

* Based on Inge Pierre 2010

⁴ The table is based on the guidance document "DIN EN 16001: Energy Management Systems in Practice. A Guide for Companies and Organisations", published by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environment Agency. No legal guarantee can be taken up for the correctness of the table. EMAS registered organisations still need to review individual prerequisites or requirements when implementing an energy management system according to EN 16001.