

TÜV NORD – European Energy Efficiency Directive (EED)

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 energy-efficiency-directive

The EU Energy Efficiency Directive

In order to achieve the common goal of a 20 per cent rise in energy efficiency by the year 2020, and also to initiate improvements above and beyond this, the European Union issued Energy Efficiency Directive 2012/27/EU at the end of 2012.

The political objective is to encourage the relevant target groups to behave in a sustainable way and to save resources. This means that they not only make a contribution to environmental and climate protection, but can at the same time also benefit from savings (e.g. energy costs) and official funding. One of the most important components of the EU Energy Efficiency Directive, therefore, is that businesses are obliged to undergo energy audits, introduce energy management systems or undertake validation in accordance with EMAS.

The individual EU Member States are responsible for concrete implementation of the Directive.

Who is affected?

The new law on energy services specifies obligatory and regular energy audits for all businesses that are not deemed to be small or medium-sized enterprises in the sense of EU Recommendation 2003/361/EC.



In concrete terms, this means that all large enterprises with more than 250 employees or an annual turnover of more than 50 million euros and an annual balance sheet total of more than 43 million euros, are required to undergo such an energy audit. This obligation also applies to smaller businesses which are part of a large enterprise which meets these criteria.

The rules apply to businesses from all areas – from manufacturing and production through trading companies and the financial sector up to health providers.

	by 05/06/2014	by 05/12/2015	at least every 4 years
EED	Enactment of the Directive by the EU Member States by 05.06.2014 → Facilitation of high quality and cost-effective energy audits for all final customers by the EU Member States	Obligatory energy audits* for businesses which are not small or medium-sized enterprises (independent and cost-effective auditing by qualified and/or accredited experts or authorities)	Repetition of the energy audit at least every four years from the date of the previous energy audit

*Businesses that install or are already operating an environmental management system according to EMAS are exempted

**Obligation to carry out energy audits or certification according to
 ISO 50001 or EMAS for all non-SMEs**

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What are the concrete requirements and what alternatives are available?

The affected organisations are obliged to undergo an energy audit according to Standard EN 16247-1 by 5 December 2015 at the latest, and then at least every four years thereafter.

Companies which have either a certified energy management system (EnMS) according to ISO 50001 or an environmental management system according to EMAS are exempted from the rules.

These systems guarantee a continual improvement process by means of the PDCA cycle (Plan-Do-Check-Act). Regular surveillance audits create sustainable awareness of how to save energy and encourage motivation to implement suitable measures. In addition, consideration of the entire organisation makes it possible to cover all relevant aspects and therefore gain an advantage.

What rules have to be followed within the framework of an energy audit?

- The basis for the energy audit demanded in the EU Energy Efficiency Directive is Standard EN 16247-1, which defines the procedure.
- In exceptional cases, it is possible for in-house company personnel to undertake the energy audit themselves.
- The company must appoint an internal or external energy representative as contact and coordinator for the energy audit.
- The Federal Office for Economic Affairs and Export Control checks on a random sample basis whether these rules are being observed and the energy auditor has the necessary qualifications.
- The energy audit considers all the parts and locations of an enterprise, with the aim of representing at least 90 per cent of the total energy consumption.

How is a certified energy management system according to ISO 50001 different from EN 16247-1?

An energy audit in accordance with EN 16247-1 consists of systematic examination and analysis of the energy usage of a plant, organisation etc. with the aim of identifying and documenting energy efficiency potentials.

An energy management system in accordance with ISO 50001, in contrast, considers the interacting elements as a whole in order to establish an energy policy and strategic energy goals and also processes and procedures aimed at achieving these strategic goals (PDCA/continual improvement process). Certified companies profit from this in many different ways:

- They work in a way which is energy-efficient and sustainable, reduce CO₂ emissions and therefore make a significant contribution to environment and climate protection.
- They gain transparency with regard to their energy consumption and can assign energy costs to the actual consumers. This reveals energy saving potentials.
- Corresponding measures can be drawn from the knowledge that is gained – for example for the production process or for purchasing. These measures help to permanently reduce energy costs.
- It might also be possible to take advantage of tax concessions and other benefits or subsidies.
- Managers and employees are made more aware of energy efficiency, often resulting in further valuable proposals for energy saving.
- Certified enterprises fulfil the ever-increasing demands of their investors, partners and clients. Energy management therefore helps to increase competitiveness.
- Legal requirements (for example from the EU Energy Efficiency Directive) are fulfilled in their entirety.

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	ISO 50001	EN 16247-1	EMAS
Basic principles	<ul style="list-style-type: none"> ■ Integrated consideration of the interacting elements 	<ul style="list-style-type: none"> ■ Analysis of energy use and consumption 	<ul style="list-style-type: none"> ■ Valid EU Standard for environmental management systems ■ Suitable for enterprises of all sizes and from all sectors
Benefits	<ul style="list-style-type: none"> ■ Energy management system can be combined with existing ISO 14001 certification ■ Identification of energy-saving potentials ■ Less mandatory documentation, can therefore be implemented simply and efficiently 	<ul style="list-style-type: none"> ■ Identification of energy impacts and potentials for improvements in energy efficiency ■ Summary of energy potentials and measures in an energy report 	<ul style="list-style-type: none"> ■ Participants in EMAS are entered into a public register ■ Certificate from the responsible registration body
Work and time needed	medium	low	high
Recommendation	<p>Certification of the EnMS is suitable for all enterprises with high energy consumption who wish to improve their energy efficiency on a permanent basis, using the "Plan-Do-Check-Act" (PDCA) cycle and the continual improvement process.</p>	<p>Energy audits make possible systematic discovery of energy-saving potentials. Energy audits according to EN 16247-1 are, however, also a suitable preparation for installation of an EnMS according to ISO 50001.</p>	<p>An EMAS validation is suitable for all companies who, in addition to utilisation of energy saving potentials, also wish to achieve comprehensive improvement of their environmental performance.</p>

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Several sites – one certification

Businesses with several sites – including abroad – can save time and costs by means of a sampling procedure (multi-site procedure). Prerequisite: all sites are subject to a common (management) system and have a legal or contractual relationship with the headquarters of the company. Other rules may apply for companies whose registered office is outside Germany.

■ Installation of an energy management system according to ISO 50001 by 31 December 2016

The multi-site procedure according to DAkkS Accreditation Rule (Akkreditierungsregel) 71 SD 6 022 is generally applicable, in so far as the above prerequisites are fulfilled.

■ Installation of an environmental management system according to EMAS by 31 December 2016

There are opportunities for the use of a sampling procedure (the rules of the German accreditation and licensing organisation for environmental assessors (DAU) apply)

■ Performance of energy audits according to EN 16247-1 by 05 December 2015

The multi-site procedure (DAkkS) is also to apply here.

TÜV NORD has a comprehensive network of international subsidiaries and is represented in most EU countries by experts who can ensure efficient and low-cost implementation of the legal requirements for companies active on the international stage.

How can TÜV NORD help?

TÜV NORD is an internationally recognised and reliable partner for testing and certification services. Our experts and auditors have great depth of knowledge and are generally permanently employed by TÜV NORD. This is a strong guarantee of independence and neutrality, and also continuity, when working for our clients.

In the field of energy management systems, TÜV NORD was one of the first to be accredited by the official German accreditation body (DAkkS) and is therefore one of the leading certification companies. Experts from TÜV NORD are happy to advise you in deciding which implementation route is best for you and we can also let you know the minimum requirements you have to fulfil in order to implement the Federal Act on Energy Services and other Energy Efficiency Measures.



Please visit our website at www.tuv-nord.com/energy-efficiency-directive and take advantage of our *free preliminary check*.

Find out without obligation which energy efficiency measure – **energy audit according to EN 16247-1, energy management system according to ISO 50001 or validation according to EMAS** – is most suitable for your business. And why not make sure that you are always informed about the latest legislation by registering for our newsletter?