



Beelas Group

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***European directive 2012/27/EU :
Transposition of article 8
related to mandatory energy
audit***

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Christian Laur : christian.laur@beelas.eu

Jean-Luc Harnet : Jeanluc.harnet@beelas.eu



INTRODUCTION

The new Directive 2012/27 established a common framework of measures for the promotion of energy efficiency within the European Union in order to achieve all three “20-20-20 by 2020” which becomes a matter of urgency.

This directive came into force on December 4th, 2012 and most of its provisions had to be implemented by the Member States before June 5, 2014.

By July 2014, only Denmark has complied with. However, on August 11th, 2014, the European Commission sent a call for order to 24 States in violation of law and gave them a two-month period to come into compliance.



ARTICLE 8 : ENERGY AUDIT & SMES

Key points regarding this mandatory energy audit are presented below:

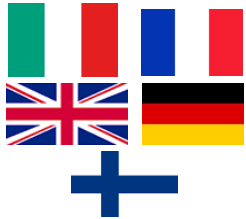


- ❖ Member states shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation by December 5th, 2015 and at least every four years from the date of the previous energy audit;
- ❖ Enterprises that are not SMEs and that are implementing an energy or environmental management system - certified by an independent body according to the relevant European or International Standards - shall be exempted from mandatory audit, provided that Member States ensure that the management system concerned includes an energy audit on the basis of the minimum criteria;
- ❖ Member states are invited to promote the availability to all final customers of high quality energy audits which are cost-effective and carried out in an independent manner by qualified and/or accredited experts according to qualification criteria.”;

- ❖ Energy audit may be carried out by in-house experts or energy auditors provided that the Member State concerned has put in place a scheme to assure and check their quality, including, if appropriate, an annual random selection of at least a statistically significant percentage of all the energy audits they carry out. “.

HOW ARTICLE 8 WAS OR WILL BE TRANSPOSED ACROSS EUROPE?

Only a minority of Member States have provisions already in place which mostly meet the requirements of Article 8. Energy audit obligations for enterprises (and in some cases also for other sectors) are present in Bulgaria, Croatia, the Czech Republic, Portugal, Romania and Slovakia.




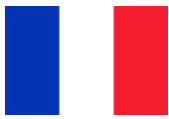
Analysis of texts of law and MS draft papers showed that definition of large companies, who will be concerned by this mandatory energy audit, is not the same around Europe.

		
<p>Companies having more than 250 employees OR issuing financial reports showing an annual turnover greater than €50 millions AND a balance sheet exceeding €43 millions,</p>	<p>Companies having more than 250 employees AND issuing financial reports showing an annual turnover greater than €50 millions OR a balance sheet exceeding €43 millions,</p>	<p>Companies having more than 250 employees OR issuing financial reports showing an annual turnover greater than €50 millions OR a balance sheet exceeding €43 millions,</p>


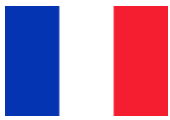
In Italy, it will concern also enterprises taking benefit of the discounts on electricity for energy intensive users.

The standard EN 16247 which covers the general requirements common to all energy audits will be selected as a structured and harmonized methodology in most of the European countries. Indeed, this standard specifies the requirements, common methodology and deliverables for energy audits. It applies to all forms of establishments, all forms of energy and uses of energy (buildings, process and transport), excluding individual private dwellings.

Regarding non-compliance penalties, each country defined a specific system depending on the national road map. As an example:

			
from £5,000 to £50,000	from 4000 to 40000 Euros, if energy audits are not implemented and from 2000 to 20000 Euros, if energy audits are not in compliance with the relevant national provisions.	from €10,000 to €50,000	from 2 % to 4 % of the annual turnover

For the perimeter of energy audit, only UK and France have defined transposition for this item :

	
at least 90% of the total consumption over 12 months	at least 80% of the total consumption. For the first period (before December 5 th , 2015) it could cover only 65 %

Total energy consumption covers all purchased energy, combustible fuels or self-generated power, for buildings, transport or industrial activities.

In most European countries, this mandatory audit must be carried out by certified personnel except France, which will require the qualification for the energy company services. Process are presented below for each scheme and each country:



- **Internal auditor**

Internal auditor (s) has to fulfil the following requirements :

- They have to be able to implement requirements established by the standard NF EN 16247-1: 2012 (16247-2, 16247-3, 16247-4),
- Among the internal audit team, one or several technical referents are chosen in order to pursue a full operational role in the production of the audit and the validation of the audit report. The minimum experience required in the energy management area linked to the audit is :

- 2 years for technical referents with a level I diploma
- 3 years for technical referents with a level II diploma
- 5 years for technical referents with another diploma
- They are only allowed to be internal auditor for the company in which they work
- **External auditor** (an energy auditor working for a qualified company by LNE or OPQIBI under NF X 50-091)

The applicant appoints one or more technical referents having an operational role in the production and / or validation of energy audits. The minimum experience required in the energy management area linked to the audit is:

- 3 years for technical referents with a level I diploma
- 4 years for technical referents with a level II diploma
- 7 years for technical referents with another diploma



Internal or external auditor

Lead assessors can be employees or external contractors as long as they are members of an approved professional body register :

- Association of Energy Engineers – certified energy auditor international CEA-I
- Association of Energy Engineers – certified energy manager international (CEM-I)
- CIBSE (The Chartered Institution of Building Services Engineers) – CIBSE low carbon consultant (LCC) register, ESOS lead assessor subset
- ECMK Limited - ECMK ESOS lead assessor register
- Elmhurst Energy Systems – Elmhurst approved ESOS lead assessor
- Energy Institute (EI) – chartered energy manager
- Energy Institute (EI) – register of professional energy consultants (RPEC)
- Institution of Chemical Engineers – register of chartered chemical engineers (MChemE/FICHEM E) ESOS LEA
- Institution of Environmental Sciences – IES lead energy assessor
- National Energy Services Limited - National Energy Services ESOS register
- Quidos – ESOSRegister.com

- Stroma Certification Ltd – ESOS lead energy assessor certification
- The Energy Managers Association – EMA energy saving opportunity scheme lead assessor register
- The Institute of Environmental Management and Assessment – environmental auditor and full membership of IEMA (ESOS lead assessor subset)
- The Institute of Environmental Management and Assessment – principal environmental auditor (ESOS lead assessor subset)



At the moment audits will be carried out by Energy Service Companies, Experts of Energy Management and Energy Auditors without any requirements of certification.

After two years from the entry into force of the Italian Decree, Energy Service Companies certified according to Italian standard UNI-CEI 11352, Experts of Energy Management certified according to Italian standard UNI-CEI 11339, Energy Auditors certified according to specific technical standards that must be issued according to the Italian Decree and ISPRA for EMAS will be allowed to carry out energy audits. (Expected for July 2016),



Energy Auditors must be certified by an independent body accredited by “Entidad Nacional de Acreditación (ENAC)”



The Parliament is currently treating a draft law aiming to transpose Article 8 paragraphs 4-7 of the EED (Directive 2012/27/EU) through a modification of the law on “energy services and other energy efficiency measures of 4 November 2010 (*“Gesetz über Energiedienstleistungen und andere Energieeffizienzmaßnahmen” / EDL-G*).


- ▶ According the draft, Energy auditors could be
 - ▶ **University diploma holder in Energy** (den Abschluss eines Hochschul- oder Fachhochschulstudiums in einer einschlägigen Fachrichtung oder)
 - ▶ **Qualified person on energy** (eine berufliche Qualifikation zum staatlich geprüften Techniker oder zur staatlich geprüften Technikerin in einer

einschlägigen Fachrichtung oder einen Meisterabschluss oder gleichwertigen Weiterbildungsabschluss)

The exemption for companies that are implementing the ISO 50001 or ISO 140001 including an energy audit, will be adopted in all countries.

Under the scheme, approved assessors will carry out compliant energy audits to identify cost-effective energy savings opportunities in participant buildings, industrial processes and transport. The estimation across the main European countries is presented below :

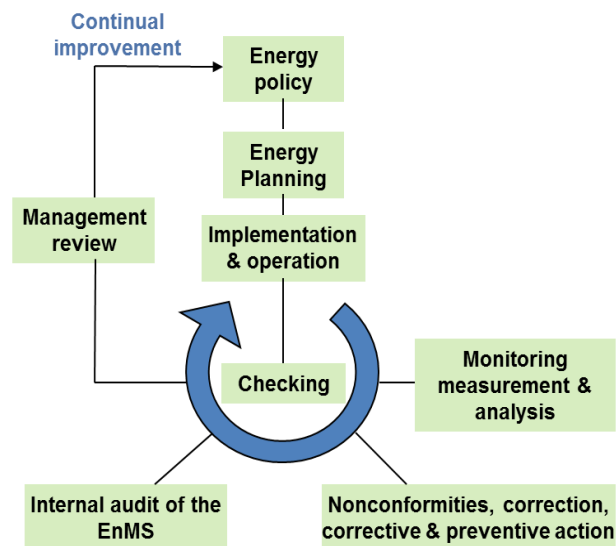
Country	Number of concerned enterprises	Market for energy services companies
	7300 large UK enterprises	120 M€
	5000 large Fr enterprises	100 M€
	16 000 large D enterprises	200 M€
	6600 large I enterprises	65 M€
	3700 large Sp enterprises	35 M€
	1000 large A enterprises	15 M€
	1700 large NL enterprises	30 M€

	4000 large B enterprises	30 M€
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German market will be split between 12500 to 14000 energy consultants, when in France, it will be a subject of split between 220 firms for Buildings activities and 16 for industry.

ISO 50001 ACROSS EUROPE

This International Standard specifies energy management system (EnMS) requirements, upon which an organization can develop and implement an energy policy, and establish objectives, targets, and action plans which take into account legal requirements and information related to significant energy use.



ISO 50001 (EnMS) : Energy Management System scheme

As presented above, enterprises that implement an ISO 50001 as an EnMS will be exempted from this mandatory energy audit.

Actually, roughly 65% of worldwide ISO 50001 certifications are taking place in Germany. Indeed, 1650 of the 3122 certified sites are in Germany. Two factors have driven the increase of this certification in Germany :

- **Exemptions from electricity tax**
Since 2007 the electricity tax accounts for 20,5 €/MWhd from 2013, companies must prove that they have an energy management system (certified by DIN EN 16001 und DIN EN ISO 50001) implemented to receive tax discounts or alternative systems for SMEs including audits – at the latest in 2015.
- **Feed-in-tariffs (FIT) for electricity from renewable energy sources (called EEG-levy)**

Since 2000 Germany uses the FIT system “Erneuerbare Energien Gesetz” (EEG) to support electricity generation from renewable sources. The subsidies are passed on to electricity consumers who pay the so called EEG-levy. This amounted to 5.3 Eurocents/kWh in 2014. In order to sustain international competitiveness of German enterprises, exemptions are possible, when companies have a certified EMS (ISO 50001, EN 16001, EMAS)

" Till December 5th 2015, the ISO 50001 path seems more complicated than energy audit"

CHRISTIAN LAUR, BEELAS GROUP

REFERENCES

- ❖ Energy Strategy for Europe : http://ec.europa.eu/energy/index_en.htm
- ❖ Energy Audits and Energy Management Systems under Energy Efficiency Directive Article 8 Workshop : <http://iet.jrc.ec.europa.eu/energyefficiency/workshop/energy-audits-and-energy-management-systems-under-energy-efficiency-directive-article-8>



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Contact :

Christian Laur : Christian.laur@beelas.eu

Jean-Luc Harnet : jeanluc.harnet@beelas.eu