



Brussels, XXX
[...] (2013) XXX draft

COMMISSION STAFF WORKING DOCUMENT

Interpretative note on Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EC, and repealing Directives 2004/8/EC and 2006/32/EC

Article 8: Energy audits and energy management systems

ARTICLE 8: ENERGY AUDITS AND ENERGY MANAGEMENT SYSTEMS

A. INTRODUCTION

1. An '*energy audit*' means a systematic procedure with the purpose of obtaining adequate knowledge of the energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy saving opportunities, and reporting the findings; (see corresponding definition in Article 2(25)).
2. Energy audits are necessary to assess the existing conditions and identify the whole range of opportunities to save energy. This should then result in proposals of concrete saving measures for the management, public authorities or home owners. Furthermore, energy audits allow the identification and prioritization or ranking of opportunities for improvement. In this way, energy audits tackle the information gap that is one of the main barriers to energy efficiency.
3. Through the identification of energy saving possibilities and proposed recommendations for follow-up, audits are also the basis for the development of a market for energy services. The result of an energy audit may be, for example, a recommendation for window replacement in a household or for insulation of piping in a factory. Furthermore, energy audits are not only centred on technical solutions such as replacements or retrofits, as significant opportunities for improvement may also exist in connection to the operation, both industrial and commercial, for example the more efficient operation and continual optimization of operating procedures, control parameters, logistic and layout optimization and maintenance planning. Energy audits may also be part of a broader environmental audit that considers storage possibilities, connection to district heating and cooling networks or potential for demand response in industries and commercial buildings. A private or public service, e.g. city public transport system, may also be subject to an energy audit that results in the identification of cost-effective energy saving opportunities.
4. Having an energy management system in place requires enterprises to carry out detailed energy review processes, which also result in the systematic identification and reporting of energy saving opportunities. This may also be the case for enterprises implementing environmental management systems.
5. Article 8 of Directive 2012/27/EU of 25 October 2012 on energy efficiency¹ (the Energy Efficiency Directive – hereafter also '*the EED*' or '*the Directive*') requires Member States to comply with the following main obligations:
 - a) Promote the availability of high quality energy audits to all final customers;
 - b) Ensure mandatory and regular audits for large enterprises;
 - c) Establish transparent and non-discriminatory minimum criteria for energy audits, based on Annex VI of the Directive; and
 - d) Establish in national legislation requirements for energy auditors, and for supervision by national authorities,
6. Article 8 also requires from Member States:

¹ Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2012/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ L 315, 14.11.2012, p.1.

- The development of programmes to encourage small and medium enterprises (SMEs) to undergo energy audits and to implement the recommendations from these audits; and
- The development of programmes to raise awareness among households about the benefits of energy audits.

The Article gives scope for the provision of incentives for the implementation of recommended measures.

7. Obligations for Member States in relation to energy audits existed in the Energy Services Directive ('the ESD')². Provisions on qualification of experts, independent control systems and quality assurance and energy performance certificates also exist in Directive 2010/31/EU on the energy performance of buildings (recast of the earlier Directive 2002/91/EC, hereinafter 'the EPBD')³. The relationship between these is explained below.
8. Article 8(1) and Article 8(4) of the Directive establish the two main obligations for Member States to promote the availability of energy audits and to ensure that large enterprises carry out regular energy audits. Whilst the obligation for large enterprises to carry out regular energy audits is new, an obligation for Member States to ensure the availability of efficient high-quality energy audit schemes, which are carried out in an independent manner, to all final consumers, including smaller domestic, commercial and small and medium-sized industrial customers was already established in similar terms in Article 12 of the ESD. In cases where energy audits are not commercially available for certain market segments, such as households, Member States had the obligation to ensure the availability of such audits. Article 12(3) of the ESD specified that audits resulting from schemes based on voluntary agreements between organisations of stakeholders and an appointed body, by the Member States concerned in accordance with Article 6(2)(b) of the ESD, were to be considered as having fulfilled the requirements for Member States to ensure the availability of energy audits. Article 8(2) and 8(5) of the EED maintain the possibility for Member States to conclude voluntary agreements for the implementation of energy audits, both in SMEs and in large enterprises.
9. Article 11 of the EPBD imposes the obligation on Member States to establish a system of certification of the energy performance of buildings. This makes it possible for owners or tenants of a building to assess its energy performance and compare it with others. According to Article 12 of the ESD, certification in accordance with Article 7 of Directive 2002/91/EC on the energy performance of buildings⁴ must be regarded as equivalent to an energy audit meeting the requirements set out in Article 12(1) and (2) of the ESD. However, in recognition of the wider scope of energy audits under Article 8 of the EED, the EED no longer keeps this equivalence.
10. Article 8 of the ESD establishes that Member States must ensure, where they deem it necessary, the availability of appropriate qualification, accreditation and/or certification

² Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services, OJ L 114, 27.4.2006, p.64.

³ Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast), OJ L 153, 18.6.2010, p.13.

⁴ Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings, OJ L1, 4.1.2003, p.65.

schemes for the providers of energy audits. Complementing the provisions of Article 8, Article 16 of the EED on the availability of qualification, accreditation and certification schemes establishes that where a Member State considers that the national level of technical competence, objectivity and reliability is insufficient, the Member State must ensure that, by 31 December 2014, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, are available for the providers of energy audits.

11. Certification aspects are also part of the EPBD. Its Article 17 establishes that Member States must ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating in a self-employed capacity or employed by public bodies or private enterprises. Experts must be accredited taking into account their competence. This Article requires that Member States must make available to the public information on training and accreditations. Member States must ensure that regularly updated lists of accredited companies which offer the services of such experts are made available to the public. Similarly, under Article 17(1) of the EED on information and training, Member States must ensure that information on available energy efficiency mechanisms and financial and legal frameworks is widely disseminated to all relevant market actors such as consumers or environmental and energy auditors. The possible synergies between the transposition and implementation of Articles 8, 16 and 17 of the EED and the implementation of the EPBD (in particular Articles 17 and 18) is developed in this interpretative note.
12. This note aims to provide guidance to Member States on how to apply Article 8 of the EED. The note states the views of the Commission, is not legally binding and is without prejudice to the case-law of the Court of Justice ('the Court') and its development.

B. OBLIGATION TO PROMOTE THE GENERAL AVAILABILITY OF ENERGY AUDITS

B1. Expertise and national supervision

13. Under Article 8(1) of the EED, Member States must promote the availability to all final customers of high quality energy audits which are cost effective and (a) carried out in an independent manner by qualified and/or accredited experts according to qualification criteria; or (b) implemented and supervised by independent authorities under national legislation. These criteria (cost-effective, undertaken by qualified/accredited experts and supervised by independent authorities) have to be applied to energy audits promoted by Member States' programmes - e.g. information campaigns or other support actions - and to those referred to under Article 8(4) (see section C). As a consequence, Member States have to ensure that energy audits become available to all final customers and check that they fulfil the above-mentioned criteria. Member States must also put in place penalties for cases of non-compliance.
14. The cost-effective and independent energy audits referred under point 13 above may be carried out by in-house experts or energy auditors in accordance with Article 8(1). The condition for in-house experts or energy auditors to carry out energy audits is 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 (Article 8(1)). Where energy audits are carried out by in-house experts, the necessary independence would require these experts not to be directly engaged in the activity audited. This follows from the wording of Recital 25.

15. Article 8(1) refers to promoting the availability to '*all final customers*' of high quality energy audits. 'Final customer' is defined in Article 2(23), and means a natural or legal person who purchases energy for own end use.

B2. Minimum criteria for energy audits

16. For the purpose of guaranteeing the high quality of the energy audit and energy management systems, Member States must establish transparent and non-discriminatory minimum criteria for energy audits based on Annex VI on '*Minimum criteria for energy audits including those carried out as part of energy management systems*'.

17. Annex VI establishes the guidelines on which the energy audits referred to in Article 8 must be based. These guidelines consist of six elements or criteria which should be examined in each case and which should each be incorporated in some way in the minimum criteria to be established at national level. On the basis of Annex VI, national minimum criteria need to make clear that energy audits must be based on up-to-date data on energy consumption and comprise a detailed review of the energy consumption profile, building whenever possible on life-cycle cost analysis. Energy audits must allow the reliable identification of the most significant opportunities for improve in energy efficiency, permitting detailed calculations for the proposed measures. The data used in energy audits must allow performance to be tracked. Member States may add additional elements. They may also indicate in which circumstances a particular item of the six elements or criteria would be most relevant (e.g. life-cycle cost analysis). Member States through their national minimum criteria may tailor the needs for different segments where they promote energy audits, for instance to SMEs (for whom a detailed audit may not be cost-effective), a public service (e.g. a city public transport service) or households. More detail is provided in section C4.

B3. Transfer of findings

18. Energy audits must not include clauses preventing the findings of the audit from being transferred (on condition that the customer does not object) to any qualified/accredited energy service provider. Energy audits referred to under Article 8(1) of the EED must be compliant with relevant data protection legislation, and in particular with Directive 95/46/EC⁵.

C. SPECIFIC OBLIGATION FOR LARGE ENTERPRISES TO CARRY OUT REGULAR ENERGY AUDITS

C1. Scope of the obligation

19. Under Article 8(4), the obligation to carry out regular energy audits lies exclusively on large enterprises (*that are not SMEs*). Article 8(4) does not exclude any sector (example ETS sectors or Integrated Pollution Prevention and Control – IPPC – licence holders). Contrary to

⁵ Directive 95/46 of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, OJ L281, 23/11/1995, p. 31.

Article 8(1), no reference to *'final customers'* is made in Article 8(4). Therefore all large enterprises must fulfil this obligation.

20. When establishing the scope of this obligation, Member States must follow the definition of the category of *'small and medium-sized enterprises'* or *'SMEs'* in Article 2(26) of the Directive. According to this definition, SMEs are *'enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003; the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million'*⁶. This harmonised definition allows consistent requirements for companies operating in different EU Member States.
21. In order to be an SME an undertaking must first fall within the definition of *'enterprise'*, which is *'any entity engaged in an economic activity, irrespective of its legal form'*. Any activity whereby goods and services are offered on a given market is an economic activity⁷. It is important to underline that the definition of SMEs in Article 2(26) does not refer to energy intensity or to energy consumption and that the definition, as a provision of a Directive, is fully legally binding.⁸
22. It follows from the definition that the number of employees is the main criterion for determining whether an enterprise is an SME. The headcount is accompanied by a financial criterion, either turnover or balance sheet total. A SME does not need to satisfy both financial criteria.
23. In line with Commission Recommendation 2003/361/EC concerning the definition of micro, small and medium-sized enterprises, national labour rules apply as regards the definition of *'employees'*. Apprentices and students with vocational training contracts should not be counted, nor should employees away on maternity or parental leave.
24. According to this Recommendation, enterprises can use the data contained in their last approved annual accounts to make the staff and financial calculations. To calculate their data, enterprises registered in a given country have to establish whether they are autonomous, partner or linked enterprises⁹. Enterprises need to include the data of other related enterprises in other countries (anywhere in the world) to assess whether they can be considered to be an SME or not. An enterprise that holds over 25% of capital or voting rights in another enterprise, or vice versa 25% of its capital or voting rights are held by a different enterprise, is a partner or linked enterprise. That means that the number of staff, turnover and/or balance sheet of the enterprises must be added together to see if they are below the SME threshold. It is still possible for two small linked enterprises to be SMEs. In general, most SMEs are autonomous since they are either completely independent or have one or more minority partnerships (each less than 25% with other enterprises). If an enterprise is autonomous, it

⁶See Commission Recommendation 2003/361/EC of 6 May 2003, OJ L 124, 20.5.2003, p.36.

⁷Case 118/85 Commission v Italy [1987] ECR 2599, paragraph 7; Case C-35/96 Commission v Italy [1998] ECR I-3851, CNSD, paragraph 36), C-309/99 Wouters [2002] ECR I-1577, paragraph 46.

⁸Note that Commission Recommendation 2003/361/EC of May 2003 forms part of the legal *'acquis'* in other areas of EU law, for instance the definition of SME contained in this Recommendation is included in the Annex to the General Block Exemption Regulation, Commission Regulation 800/2008.

⁹In general, most SMEs are *autonomous* since they are either completely independent or have one or more minority partnerships (each less than 25%) with other enterprises. If that holding rises to no more than 50%, the relationship is deemed to be between *partner* enterprises. Above that ceiling the enterprises are *linked*.

needs to use only the number of employees and the financial data contained in its annual accounts to check if it respects the thresholds mentioned in point 19 above.

25. As a result, small branches in one Member State may need to carry out an energy audit every four years because they do not fall within the definition of SME and therefore come within the category of large enterprises. This should not be considered as an extra burden or disproportionate¹⁰ because on the one hand such enterprises may well be implementing energy management systems (see section C3) or may have arrangements whereby the branch could be helped with the audit, for example by in house experts from the parent company; and on the other hand, because the energy audit in question is likely to have a more limited scope and cost.
26. It follows from Article 8(4) that enterprises other than SMEs must carry out a first energy audit, in a form that fulfils the requirements of Article 8(4), between the date of entry into force (4 December 2012) and, at the latest, 5 December 2015. Then, according to the maximum four-year interval, if the first energy audit took place, for example, on 15 January 2013, the next one must happen at the latest four years later (before 15 January 2017 in this example).
27. Large enterprises that have carried out more than one energy audit before 5 December 2015 have flexibility to assess which audit is to be counted as the first one for the purposes of the Directive, provided that the energy audit in question fulfils the national minimum criteria for energy audits based on Annex VI.

C2. Expertise and national supervision

28. Article 8(4) requires Member States to ensure that enterprises that are not SMEs fulfil the energy audit obligations. Member States must ensure that they 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 5 December 2015 and at least every four years from the date of the previous energy audit*'. To be able to ensure that large enterprises fulfil the obligations established in Article 8(4), Member States have to identify the enterprises that fall under this obligation.
29. The criteria for the energy audits under Article 8(4) are identical to those of Article 8(1) described in point 13 above. In other words the same criteria apply when large enterprises fulfil their energy audit obligations and when Member States promote the use of energy audits.
30. Similarly, the possibility for in-house experts or energy auditors to carry out energy audits only applies for those subject to the strict criteria named in 8(1) and 8(4), *i.e.* carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented or supervised by independent authorities under national legislation. Likewise, the condition for in-house experts or energy auditors to carry out energy audits is 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

¹⁰ Annex VI(d) requires energy audits to be 'proportionate'. The principle of proportionality implies testing that a legislative or administrative measure or means is appropriate and necessary in order to reach or achieve a given goal or objective. The Court of Justice of the European Union applies the proportionality principle when it balances legislative measures against private interests, individual rights and fundamental freedoms.

the energy audits they carry out (Article 8(1)). The national scheme for checking the quality of in-house experts or energy auditors can be the same as for external ones. Where energy audits are carried out by in-house experts, the necessary independence would require these experts not to be directly engaged in the activity audited (recital 25).

C3. Exemptions

31. Article 8(6) provides exemptions to the obligation for large enterprises to carry out regular energy audits, when those enterprises are implementing an energy or environmental management system '*certified by an independent body according to the relevant European or International Standards*'. The definition of 'energy management system' is provided in Article 2(11) whereby it '*means a set of interrelated or interacting elements of a plan which sets an energy efficiency objective and a strategy to achieve that objective*'. In the context of Article 8(6), the exemption to the audit obligation for large enterprises refers specifically to formalised energy management systems complying with relevant European and International Standards.
32. Typically, when a large company has in place an energy management system, a continuous energy review process is carried out to control and reduce energy use. The result of this process of detailed review of the energy consumption profile and identification of opportunities for energy saving is equivalent to that of discrete, regular energy audits. In addition, separate energy audits (with the same scope as the energy management system or with a narrower scope e.g. covering individual sites, buildings or processes) may also be carried out to support the implementation of the energy management system. For these reasons, enterprises that are implementing an energy or environmental management system – certified by an independent body according to the relevant European and International Standards – are considered to satisfy the energy audit requirement of Article 8(4) in terms of results and are therefore exempted from this obligation.
33. In order for this exemption to apply the Member States must ensure that the management system concerned includes an energy audit on the basis of minimum criteria set out in Annex VI. In practice, this requires in the first place identifying the management system in question and the standard that it follows. Subsequently, the accreditation/certification status of the management system and of the accreditation/certification body (or for self-certification where applicable) needs to be checked to make sure that the implementation of the management system fulfils the requirements described in the following section (C4).
34. Experience so far has shown that in many Member States energy audits and energy management systems are promoted through voluntary agreement programmes. In fact, for some of these programmes, implementing an energy management system is a prerequisite for participation in a voluntary agreement scheme. This is recognised in Article 8(5) of the Directive, which states that large enterprises implementing energy audits under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the Member State concerned, or other bodies to which the competent authorities have delegated the responsibility concerned, or by the Commission, are considered as fulfilling the requirements of Article 8(4).
35. Energy performance certification in accordance with Article 11 of the EPBD, and inspections in accordance with its Articles 14 and/or 15, cannot automatically be regarded as equivalent to energy audits under Article 8 of the EED (which are e.g. based on measured data on energy

consumption and load profiles for electricity, examine - where applicable - industrial operations or installations, including transportation, and allow detailed and validated calculations to provide information on potential savings). However, it is possible that in specific cases (for instance when auditing office buildings of a large enterprise) certification and/or inspections under the EPBD in a given Member State may fulfil the requirements of Article 8 and Annex VI of the EED.

C4. Scope of the energy audit and minimum criteria to be fulfilled

36. As mentioned in section B2, Member States must establish minimum criteria for energy audits based on those listed in Annex VI. The minimum criteria in Annex VI include guidelines on the data to be used, the depth and scope of the audit, the recommended cost analysis and the quality requirements in terms of representativeness of the energy audits referred to in Article 8.
37. The national minimum criteria to be established on the basis of Annex VI apply to energy audits promoted by the Member States under Article 8(1) and mandatory audits by large enterprises under Article 8(4). As mentioned before, these audits also need to satisfy the strict criteria for expertise and national supervision (see sections C1 and B2). The respect of national minimum criteria on the basis of Annex VI and of strict criteria for expertise and national supervision apply equally to Articles 8(5) and 8(6) as they provide for exemptions and for equivalent requirements to those established in Article 8(4), *i.e.* regular energy audits for large enterprises. Other energy audits that may be implemented in the Member States and that are not promoted by Member States and not implemented by large enterprises to fulfil the mandatory requirement are not subject to these strict requirements.
38. The first guideline in Annex VI (a) is that energy audits must be based on up-to date, measured, traceable operational data on energy consumption and, in the case of electricity, load profiles.
39. Annex VI (b) states that energy audits must comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation. At the same time, Annex VI(d) states that energy audits must be sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities of improvement. Therefore, national minimum criteria based on Annex VI must make clear that all energy related aspects listed in point (b) (buildings or groups of buildings, industrial operations or installations, including transportation) must be systematically screened. According to this screening, the scope and boundaries (*i.e.* physical or site limits, extent of activities or facilities addressed) of each energy audit and the degree of thoroughness needed for drawing up the required reliable assessment are to be defined on a case by case basis.
40. Examples of possible scopes are the whole site and all energy using systems or the boiler plant, one or more production lines or the offices, the vehicle fleet or the on-site transportation. Different levels of detail are also possible, depending for instance on whether accuracy sufficient for investment decisions is needed, or whether it is necessary to visit a proportion of similar sites of the same company. The obligation to carry out an energy audit at least every four years is not in contradiction with carrying out audits with narrower scopes over a period of time and within the four year periodicity of the audit requirement. Consideration could be given for example to planning energy audits for different sites or

focusing first on processes and later on office buildings, with different timeframes within the four-year cycle.

41. The flexibility to adjust both the scope and boundaries and the level of detail must not contradict the requirement to make a representative assessment of the overall energy performance and to identify and prioritise energy saving opportunities. For instance, it would not be justifiable for an enterprise for which the transportation aspects of its operations are the main user of energy not to include this in the scope of the energy audit. On the other hand, the energy audit of a given enterprise is not expected to assess the energy use of its transport service providers (if these come from a different enterprise).
42. The guideline for energy audits in Annex VI(c) is to build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP)¹¹ in order to take account of long-term savings, residual values of long-term investments and discount rates. This is particularly relevant in cases where audits need to be of such quality that investment decisions can be based on them. For example in the residential sector, it is increasingly common to link support under financial instruments to carrying out an energy audit as an starting point for energy efficiency projects.
43. Annex VI also indicates that the energy audits referred to in Article 8 must allow detailed and validated calculations to provide clear information on potential savings. The data used in energy audits must be storable for historical analysis. This means that relevant data, used or produced during the audit work, must be presented in the energy audit reports in a form that can be used for e.g. programme level monitoring purposes.
44. In line with recital 24, the minimum criteria in Annex VI are not more far reaching than the requirements of the relevant European or International Standards. It follows from the wording of this recital that energy audits should take into account relevant European or International Standards, such as, for example, EN ISO 50001 (Energy Management Systems), or EN 16247-1 (Energy Audits)¹², or, if including an energy audit, EN ISO 14001 (Environmental Management Systems).
45. These standards can provide useful guidance in developing national minimum criteria on the basis of Annex VI. Furthermore, EN 16247-1 was developed specifically in the context of the former Energy Services Directive and could be applied as a consistent tool as part of a wider management system (e.g. EN ISO 50001 or EN ISO 14000). There is a new ISO International Standard 50002 under development setting standards for conducting an energy audit. It should be noted that although reference is made to both ISO 50001 and ISO 14000, ISO 50001 targets specifically energy consumption, whilst ISO 14000 focuses more generally on environmental improvements.
46. When developing national minimum criteria for energy audits, the above mentioned standards may in particular provide useful guidance for the definition of the scope and level of detail of

¹¹ An energy investment's Simple Payback Period is the amount of time it will take to recover the initial investment in energy savings, dividing initial installed cost by the annual energy cost savings. While Simple Payback is easy to compute, its weakness is that it fails to factor in the time value of money, inflation, project lifetime or operation and maintenance costs.

¹²As part of the standardisation work on energy audits in the framework of the mandate M/479 from the European Commission to CEN and CENELEC, this first standard on general requirements for energy audits has been published. Specific standards on energy audits in buildings, processes and transport are being finalised. In addition, a specific additional standard for the qualification of energy auditors is under preparation.

an energy audit. For example standards can provide guidance for the assessment of levels of detail that an energy audit may require, tailored to the subject of the audit (*i.e.* building or group of buildings, an industrial or commercial operation or installation or a private or public service) and with sufficient flexibility to adapt to particular circumstances.

C5. Penalties and transposition

47. Because the transposition of Article 8 requires Member States to impose obligations on third parties, Member States are required to lay down rules on penalties applicable in case of non-compliance with the national provisions adopted pursuant to this Article (see Article 13). These penalties must be ‘*effective, proportionate and dissuasive*’ and must be notified to the Commission within 18 months of the coming into force of the Directive.
48. In some Member States, a register of enterprises that are not SMEs already exists. There are several other tools that Member States could consider using to know how many and which enterprises fall under the scope of the audit obligation on large enterprises. Both Eurostat and often national statistic offices have some analysis (at least total numbers) by enterprise size class, differentiating between large and SMEs in line with the EU harmonised definition of SME. Member States could consider using national obligations that enterprises submit consolidated accounts in line with the financial reporting legislation in the EU established in the 1970s and 1980s¹³ as an indication of an enterprise's status (as a large enterprise). This legislation has been amended in line with the harmonised EU definition of SME of 2006. In addition, stock exchange offices usually operate public registries of companies by sector and by size. Member States may also consider establishing other reporting mechanisms for large enterprises to report on compliance.
49. Member States must bring into force laws, regulations and administrative provisions necessary to ensure that large enterprises comply with the above requirements by 5 June 2014. Member States must communicate to the Commission the relevant provisions of national law.

D. LINKS TO NATIONAL SUPERVISORY BODIES SET UP UNDER EPBD AND TO BROADER AUDITS

D1. National supervisory bodies and qualification criteria under EPBD

50. The Commission services encourage Member States to explore synergies between the transposition and implementation of Article 8 of the Energy Efficiency Directive and of the implementation of the EPBD (in particular Articles 17 and 18), especially as regards the national supervisory authorities set up under national legislation to make sure that energy audits are cost effective and carried out in an independent and cost-effective manner by qualified and/or accredited experts according to certain qualification criteria or implemented and supervised by independent authorities under national legislation. These qualification criteria may nevertheless differ given that the scope of energy audits under the EED is wider than the certification of buildings under the EPBD. In particular, the focus of energy audits under the EED – even for buildings and households – goes beyond the technical characteristics of the buildings and includes e.g. all electricity uses and behavioural changes such as impact of occupant activity on energy consumption.

¹³ See in particular the so-called 4th Company Law Directive on annual accounts (Directive 78/660/EEC) and the 7th Company Law Directive on consolidated accounts (Directive 83/349/EEC).

D2. Energy audits as part of a broader environmental audit

51. Energy audits may stand alone or be part of a broader environmental audit. Member States may require that an assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network must be part of the energy audit. Energy audits may also consider storage possibilities or potential for demand response in industries and commercial buildings.

E. TRAINING PROGRAMMES FOR THE QUALIFICATION OF ENERGY AUDITORS AND AVAILABILITY OF QUALIFICATION, ACCREDITATION AND CERTIFICATION SCHEMES

52. A sufficient number of reliable professionals competent in the field of energy efficiency should be available to ensure the effective and timely implementation of and compliance with the requirements of the Directive on energy audits. For this purpose, Member States are required to encourage training programmes for the qualification of energy auditors (Article 8(3)).
53. Member States should put in place certification schemes for the providers of energy audits to make sure that a sufficient number of reliable professionals be available (see recital 46).
54. To further reinforce the availability of qualified experts, in accordance with Article 16 on availability of qualification, accreditation and certification schemes, where a Member State considers that the national level of technical competence, objectivity and reliability is insufficient, the Member State must ensure that, by 31 December 2014, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, become available for the providers of energy audits. Member States have discretion as to how to assess the national level of technical competence, objectivity and reliability, but if this is considered to be insufficient the previously mentioned actions must be taken before 31 December 2014.
55. Member States must ensure that qualification, accreditation and certification schemes provide transparency to consumers, are reliable and contribute to national energy efficiency objectives. Member States must take appropriate measures to make consumers aware of the availability of qualification and/or certification schemes. They must make publicly available the certification and/or accreditation schemes or equivalent qualification schemes and must cooperate among themselves and with the Commission on comparisons between, and recognition of, the schemes. The latter is important to address the sometimes diverse qualification criteria and respective quality control schemes across Member States. Moving in the direction of mutual recognition of schemes would open the European market for energy auditors.
56. The Commission services encourage Member States to explore synergies between the transposition and implementation of the EED and of the EPBD and to ensure consistency between the respective qualification/certification criteria and schemes. Accordingly, qualified energy auditors in the framework of the EED could be recognised as qualified experts to deliver EPCs in buildings. Furthermore, qualified experts to deliver EPCs in buildings could be targeted for training to become qualified energy auditors.

57. As regards the use of the terms qualification, accreditation and certification, it is important to note that Regulation 765/2008 setting out the requirements for accreditation and market surveillance¹⁴, defines 'accreditation' as '*an attestation by a national accreditation body that a conformity assessment body meets the requirements set by harmonised standards and, where applicable, any additional requirements including those set out in relevant sectoral schemes, to carry out a specific conformity assessment activity*'. According to this Regulation, individuals (e.g. energy service providers) are not accredited but certified to conduct individual activities. They can also be qualified by training. It should however be noted that EMAS (Community eco-management and audit scheme)¹⁵, which as other environmental management systems may provide for exemption of the audit requirement in large enterprises, refers to 'accredited' verifiers. Therefore the terminology used in the EED provides sufficient flexibility to encompass both the common situation where energy service providers are either qualified by training or certified, and other particular cases such as the EMAS case.
58. Under Article 17(1) on information and training, Member States must ensure that information on available energy efficiency mechanisms and financial and legal frameworks is widely disseminated to all relevant market actors such as consumers or environmental and energy auditors.

F. SMEs AND HOUSEHOLDS: INCENTIVES, AWARENESS-RAISING AND BEST PRACTICE

59. Article 8(2) of the Directive establishes that Member States must develop programmes to encourage SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits.
60. SMEs represent enormous energy saving potential for the Union. To encourage them to adopt energy efficiency measures, Member States should establish a favourable framework aimed at providing SMEs with technical assistance and targeted information (see recital 41).
61. Member States must bring to the attention of SMEs, including through their respective representative organisations, concrete examples of how energy management systems could help their businesses. The Commission must assist Member States by supporting the exchange of best practices in this domain.
62. Member States must also (Article 8(3)) develop programmes to raise awareness among households of the benefits of energy audits through appropriate advice services.

G. NATIONAL SUPPORT SCHEMES

63. Article 8 requires Member States to actively promote the availability and the use of energy audits and the implementation of their recommendations. The scope of national promotion activities covers a wide range of areas. Compulsory measures that Member States must take include encouraging training programmes for auditors (Article 8(3)); programmes encouraging SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits (Article 8(2)); programmes to raise awareness among

¹⁴ Relating to the marketing of products and repealing Regulation (EEC) No 339/93, OJ L 218/30.

¹⁵ Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

SME (Article 8(2)) and households (Article 8(3)). The national promotion programmes may be or may encompass support schemes, including State aid. The Article explicitly allows the setting up of support schemes for SMEs to carry out and implement energy audits. Article 8(2) reads: '*[...] On the basis of transparent and non-discriminatory criteria and without prejudice to Union State aid law, Member States may set up support schemes for SMEs, including if they have concluded voluntary agreements, to cover costs of an energy audit and of the implementation of highly cost-effective recommendations from the energy audits, if the proposed measures are implemented [...]*'.

64. Likewise, Member States are explicitly allowed to set up incentives and support schemes for enterprises, including non-SME enterprises, to implement the recommendations of energy audits and similar measures. Similar measures are energy or environmental management systems implemented either stand alone or under a Voluntary Agreement, and having equivalence with energy audits. Article 8(7) reads: '*[...] Without prejudice to Union State aid law, Member States may implement incentive and support schemes for the implementation of recommendations from energy audits and similar measures*'. Support schemes, when they contain State aid elements, should be without prejudice to the Union State aid law. This includes the Community Guidelines on State Aid for Environmental Protection¹⁶ and the Block Exemption Regulations¹⁷.
65. Article 8 makes the promotion of audits an important objective and creates a framework to overcome the market barriers and failures¹⁸ that impede the implementation of energy audits or equivalent energy management systems and the implementation their results. It specifically allows support measures to overcome barriers such as lack of awareness and expertise among households and SMEs, the low number of trained professionals and high initial costs of implementation without which audits would not be carried out and implemented on the scale required.

H. REPORTING OBLIGATIONS

66. In line with Article 24 of the EED on review and monitoring of implementation and its accompanying Annex XIV providing a general framework for reporting, Part 2 – General Framework for National Energy Efficiency Action Plans, point 2.3.3., Member States must ensure that the National Energy Efficiency Action Plans include the following minimum information relating to the implementation of Article 8:

(a) *The number of energy audits carried out in the previous period;*

(b) *The number of energy audits carried out in large enterprises in the previous period; and*

(c) *The number of large companies in their territory, with an indication of the number of those to which Article 8(5) – energy audits as part of voluntary agreements - is applicable.*

¹⁶ OJ C 82, 1.4.2008. The Guidelines are under revision to take into account new developments, including the EED.

¹⁷ Commission Regulation 800/2008, OJ L 214, 9.8.2008. The Regulation is under revision to take into account new developments, including the EED.

¹⁸ The Article replaces Article 12 of the ESD.

The reporting requirement under (c) is coherent with the fact that Member States need to have an indication of the number of large enterprises in their territory to be able to ensure compliance with Article 8(4).

67. Member States are also required to provide an overview of measures planned or already undertaken to promote energy audits and energy management systems, including information on the numbers of energy audits carried out, specifying those carried out in large enterprises, with an indication of the total number of large enterprises in the Member State territory and the number of enterprises carrying out energy audits as part of voluntary agreements.

ANNEX I. RELEVANT PROVISIONS OF THE ENERGY EFFICIENCY DIRECTIVE (RECITALS, ARTICLES 2, 8, 16 AND ANNEXES VI AND XIV)

Recitals

(24) To tap the energy savings potential in certain market segments where energy audits are generally not offered commercially (such as small and medium-sized enterprises (SMEs)), Member States should develop programmes to encourage SMEs to undergo energy audits. Energy audits should be mandatory and regular for large enterprises, as energy savings can be significant. Energy audits should take into account relevant European or International Standards, such as EN ISO 50001 (Energy Management Systems), or EN 16247-1 (Energy Audits), or, if including an energy audit, EN ISO 14001 (Environmental Management Systems) and thus be also in line with the provisions of Annex VI to this Directive as such provisions do not go beyond the requirements of these relevant standards. A specific European standard on energy audits is currently under development.

(25) Where energy audits are carried out by in-house experts, the necessary independence would require these experts not to be directly engaged in the activity audited.

(46) A sufficient number of reliable professionals competent in the field of energy efficiency should be available to ensure the effective and timely implementation of this Directive, for instance as regards compliance with the requirements on energy audits and implementation of energy efficiency obligation schemes. Member States should therefore put in place certification schemes for the providers of energy services, energy audits and other energy efficiency improvement measures.

Article 2

Definitions

For the purposes of this Directive, the following definitions shall apply:

(11) 'energy management system' means a set of interrelated or interacting elements of a plan which sets an energy efficiency objective and a strategy to achieve that objective;

(12) 'European standard' means a standard adopted by the European Committee for Standardisation, the European Committee for Electrotechnical Standardisation or the European Telecommunications Standards Institute and made available for public use;

(13) 'international standard' means a standard adopted by the International Standardisation Organisation and made available to the public;

(25) 'energy audit' means a systematic procedure with the purpose of obtaining adequate knowledge of the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or installation or a private or public service, identifying and quantifying cost-effective energy savings opportunities, and reporting the findings;

(26) 'small and medium-sized enterprises' or 'SMEs' means enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises; the category of micro, small and

medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million;

Article 8

Energy audits and energy management systems

1. Member States shall promote the availability to all final customers of high quality energy audits which are cost-effective and:

- (a) carried out in an independent manner by qualified and/or accredited experts according to qualification criteria; or
- (b) implemented and supervised by independent authorities under national legislation.

The energy audits referred to in the first subparagraph 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.

For the purpose of guaranteeing the high quality of the energy audits and energy management systems, Member States shall establish transparent and non-discriminatory minimum criteria for energy audits based on Annex VI.

Energy audits shall not include clauses preventing the findings of the audit from being transferred to any qualified/accredited energy service provider, on condition that the customer does not object.

2. Member States shall develop programmes to encourage SMEs to undergo energy audits and the subsequent implementation of the recommendations from these audits.

On the basis of transparent and non-discriminatory criteria and without prejudice to Union State aid law, Member States may set up support schemes for SMEs, including if they have concluded voluntary agreements, to cover costs of an energy audit and of the implementation of highly cost-effective recommendations from the energy audits, if the proposed measures are implemented.

Member States shall bring to the attention of SMEs, including through their respective representative intermediary organisations, concrete examples of how energy management systems could help their businesses. The Commission shall assist Member States by supporting the exchange of best practices in this domain.

3. Member States shall also develop programmes to raise awareness among households about the benefits of such audits through appropriate advice services.

Member States shall encourage training programmes for the qualification of energy auditors in order to facilitate sufficient availability of experts.

4. 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 5 December 2015 and at least every four years from the date of the previous energy audit.

5. Energy audits shall be considered as fulfilling the requirements of paragraph 4 when they are carried out in an independent manner, on the basis of minimum criteria based on Annex VI, and implemented under voluntary agreements concluded between organisations of stakeholders and an appointed body and supervised by the Member State concerned, or other bodies to which the competent authorities have delegated the responsibility concerned, or by the Commission.

Access of market participants offering energy services shall be based on transparent and non-discriminatory criteria.

6. 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 the requirements of paragraph 4, provided that Member States ensure that the management system concerned includes an energy audit on the basis of the minimum criteria based on Annex VI.

7. Energy audits may stand alone or be part of a broader environmental audit. Member States may require that an assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network shall be part of the energy audit.

Without prejudice to Union State aid law, Member States may implement incentive and support schemes for the implementation of recommendations from energy audits and similar measures.

Article 16

Availability of qualification, accreditation and certification schemes

1. Where a Member State considers that the national level of technical competence, objectivity and reliability is insufficient, it shall ensure that, by 31 December 2014, certification and/or accreditation schemes and/or equivalent qualification schemes, including, where necessary, suitable training programmes, become or are available for providers of energy services, energy audits, energy managers and installers of energy-related building elements as defined in Article 2(9) of Directive 2010/31/EU.

2. Member States shall ensure that the schemes referred to in paragraph 1 provide transparency to consumers, are reliable and contribute to national energy efficiency objectives.

3. Member States shall make publicly available the certification and/or accreditation schemes or equivalent qualification schemes referred to in paragraph 1 and shall cooperate among themselves and with the Commission on comparisons between, and recognition of, the schemes.

Member States shall take appropriate measures to make consumers aware of the availability of qualification and/or certification schemes in accordance with Article 18(1).

Article 17

Information and training

1. Member States shall ensure that information on available energy efficiency mechanisms and financial and legal frameworks is transparent and widely disseminated to all relevant market actors, such as consumers, builders, architects, engineers, environmental and energy auditors, and installers of building elements as defined in Directive 2010/31/EU.

Member States shall encourage the provision of information to banks and other financial institutions on possibilities of participating, including through the creation of public/private partnerships, in the financing of energy efficiency improvement measures.

2. Member States shall establish appropriate conditions for market operators to provide adequate and targeted information and advice to energy consumers on energy efficiency.

3. The Commission shall review the impact of its measures to support the development of platforms, involving, inter alia, the European social dialogue bodies in fostering training programmes for energy efficiency, and shall bring forward further measures if appropriate. The Commission shall encourage European social partners in their discussions on energy efficiency.

4. Member States shall, with the participation of stakeholders, including local and regional authorities, promote suitable information, awareness-raising and training initiatives to inform citizens of the benefits and practicalities of taking energy efficiency improvement measures.

5. The Commission shall encourage the exchange and wide dissemination of information on best energy efficiency practices in Member States.

ANNEX VI

Minimum criteria for energy audits including those carried out as part of energy management systems

The energy audits referred to in Article 8 shall be based on the following guidelines:

(a) be based on up-to-date, measured, traceable operational data on energy consumption and (for electricity) load profiles;

(b) comprise a detailed review of the energy consumption profile of buildings or groups of buildings, industrial operations or installations, including transportation;

(c) build, whenever possible, on life-cycle cost analysis (LCCA) instead of Simple Payback Periods (SPP) in order to take account of long-term savings, residual values of long-term investments and discount rates;

(d) be proportionate, and sufficiently representative to permit the drawing of a reliable picture of overall energy performance and the reliable identification of the most significant opportunities for improvement.

Energy audits shall allow detailed and validated calculations for the proposed measures so as to provide clear information on potential savings.

The data used in energy audits shall be storable for historical analysis and tracking performance.

ANNEX XIV

General framework for reporting

PART 2. General framework for National Energy Efficiency Action Plans

National Energy Efficiency Action Plans referred to in Article 24(2) shall provide a framework for the development of national energy efficiency strategies.

The National Energy Efficiency Action Plans shall cover significant energy efficiency improvement measures and expected/achieved energy savings, including those in the supply, transmission and distribution of energy as well as energy end-use. Member States shall ensure that the National Energy Efficiency Action Plans include the following minimum information:

[...]

3. Specific information related to this Directive

[...]

3.3. Energy audits and management systems (Article 8)

National Energy Efficiency Action Plans shall include:

- (a) the number of energy audits carried out in the previous period;
- (b) the number of energy audits carried out in large enterprises in the previous period;
- (c) the number of large companies in their territory, with an indication of the number of those to which Article 8(5) is applicable.

ANNEX II. RELEVANT PROVISIONS OF THE EPBD (ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE)

Article 2

Definitions

12. 'energy performance certificate' means a certificate recognised by a Member State or by a legal person designated by it, which indicates the energy performance of a building or building unit, calculated according to a methodology adopted in accordance with Article 3;

Article 11

Energy performance certificates

1. Member States shall lay down the necessary measures to establish a system of certification of the energy performance of buildings. The energy performance certificate shall include the energy performance of a building and reference values such as minimum energy performance requirements in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.

The energy performance certificate may include additional information such as the annual energy consumption for non-residential buildings and the percentage of energy from renewable sources in the total energy consumption.

2. The energy performance certificate shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of a building or building unit, unless there is no reasonable potential for such improvement compared to the energy performance requirements in force.

The recommendations included in the energy performance certificate shall cover:

- (a) measures carried out in connection with a major renovation of the building envelope or technical building system(s); and
- (b) measures for individual building elements independent of a major renovation of the building envelope or technical building system(s).

3. The recommendations included in the energy performance certificate shall be technically feasible for the specific building and may provide an estimate for the range of payback periods or cost-benefits over its economic lifecycle.

4. The energy performance certificate shall provide an indication as to where the owner or tenant can receive more detailed information, including as regards the cost-effectiveness of the recommendations made in the energy performance certificate. The evaluation of cost effectiveness shall be based on a set of standard conditions, such as the assessment of energy savings and underlying energy prices and a preliminary cost forecast. In addition, it shall contain information on the steps to be taken to implement the recommendations. Other information on related topics, such as energy audits or incentives of a financial or other nature and financing possibilities may also be provided to the owner or tenant.

5. Subject to national rules, Member States shall encourage public authorities to take into account the leading role which they should play in the field of energy performance of buildings, inter alia, by implementing the recommendations included in the energy performance certificate issued for buildings owned by them within its validity period.

6. Certification for building units may be based:

- (a) on a common certification of the whole building; or
- (b) on the assessment of another representative building unit with the same energy-relevant characteristics in the same building.

7. Certification for single-family houses may be based on the assessment of another representative building of similar design and size with a similar actual energy performance quality if such correspondence can be guaranteed by the expert issuing the energy performance certificate.

8. The validity of the energy performance certificate shall not exceed 10 years.

9. The Commission shall, by 2011, in consultation with the relevant sectors, adopt a voluntary common European Union certification scheme for the energy performance of non-residential buildings. That measure shall be adopted in accordance with the advisory procedure referred

to in Article 26(2). Member States are encouraged to recognise or use the scheme, or use part thereof by adapting it to national circumstances.

Article 14

Inspection of heating systems

1. Member States shall lay down the necessary measures to establish a regular inspection of the accessible parts of systems used for heating buildings, such as the heat generator, control system and circulation pump(s), with boilers of an effective rated output for space heating purposes of more than 20 kW. That inspection shall include an assessment of the boiler efficiency and the boiler sizing compared with the heating requirements of the building. The assessment of the boiler sizing does not have to be repeated as long as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.

Member States may reduce the frequency of such inspections or lighten them as appropriate, where an electronic monitoring and control system is in place.

2. Member States may set different inspection frequencies depending on the type and effective rated output of the heating system whilst taking into account the costs of the inspection of the heating system and the estimated energy cost savings that may result from the inspection.

3. Heating systems with boilers of an effective rated output of more than 100 kW shall be inspected at least every two years.

For gas boilers, this period may be extended to four years.

4. As an alternative to paragraphs 1, 2 and 3 Member States may opt to take measures to ensure the provision of advice to users concerning the replacement of boilers, other modifications to the heating system and alternative solutions to assess the efficiency and appropriate size of the boiler. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where Member States choose to apply the measures referred to in the first subparagraph, they shall submit to the Commission a report on the equivalence of those measures to measures referred to in paragraphs 1, 2 and 3 of this Article by 30 June 2011 at the latest. Member States shall submit these reports to the Commission every three years. The reports may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a Member State about the application of the option as described in paragraph 4, the Commission may request further specific information regarding the requirements and equivalence of the measures set out in that paragraph. In that case, the Member State concerned shall present the requested information or propose amendments within nine months.

Article 15

Inspection of air-conditioning systems

1. Member States shall lay down the necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems of an effective rated output of more than 12 kW. The inspection shall include an assessment of the air-conditioning efficiency and the sizing compared to the cooling requirements of the building. The assessment of the sizing does not have to be repeated as long as no changes were made to this air-conditioning system or as regards the cooling requirements of the building in the meantime.

Member States may reduce the frequency of such inspections or lighten them, as appropriate, where an electronic monitoring and control system is in place.

2. The Member States may set different inspection frequencies depending on the type and effective rated output of the air-conditioning system, whilst taking into account the costs of the inspection of the air-conditioning system and the estimated energy cost savings that may result from the inspection.

3. In laying down the measures referred to in paragraphs 1 and 2 of this Article, Member States shall, as far as is economically and technically feasible, ensure that inspections are carried out in accordance with the inspection of heating systems and other technical systems referred to in Article 14 of this Directive and the inspection of leakages referred to in Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases¹⁹.

4. As an alternative to paragraphs 1, 2 and 3 Member States may opt to take measures to ensure the provision of advice to users on the replacement of air-conditioning systems or on other modifications to the air-conditioning system which may include inspections to assess the efficiency and appropriate size of the air-conditioning system. The overall impact of this approach shall be equivalent to that arising from the provisions set out in paragraphs 1, 2 and 3.

Where Member States apply the measures referred to in the first subparagraph, they shall, by 30 June 2011 at the latest, submit to the Commission a report on the equivalence of those measures to the measures referred to in paragraphs 1, 2 and 3 of this Article. Member States shall submit these reports to the Commission every three years. The reports may be included in the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC.

5. After receiving the national report from a Member State about the application of the option as described in paragraph 4, the Commission may request further specific information regarding the requirements and equivalence of the measures set in that paragraph. In this case, the Member State concerned shall present the requested information or propose amendments within nine months.

Article 17

Independent experts

Member States shall ensure that the energy performance certification of buildings and the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating in a self-employed capacity or employed by public bodies or private enterprises.

¹⁹ OJ L 161, 14.6.2006, P.1

Experts shall be accredited taking into account their competence.

Member States shall make available to the public information on training and accreditations. Member States shall ensure that either regularly updated lists of qualified and/or accredited experts or regularly updated lists of accredited companies which offer the services of such experts are made available to the public.

Article 18

Independent control system

1. Member States shall ensure that independent control systems for energy performance certificates and reports on the inspection of heating and air-conditioning systems are established in accordance with Annex II. Member States may establish separate systems for the control of energy performance certificates and for the control of reports on the inspection of heating and air-conditioning systems.

2. The Member States may delegate the responsibilities for implementing the independent control systems.

Where the Member States decide to do so, they shall ensure that the independent control systems are implemented in compliance with Annex II.

3. Member States shall require the energy performance certificates and the inspection reports referred to in paragraph 1 to be made available to the competent authorities or bodies on request.