

# The Energy End-Use Efficiency and Energy Services directive (COM2006/32 EC)

## A summary of its objectives and contents

### The Directive has six key elements:

- 1 The preparation of national energy efficiency action plans every 3 years.
- 2 National indicative energy savings targets of 9% in 9 years.
- 3 The important role of the public sector, particularly as a market-driver.
- 4 Governments can impose public service obligations regarding energy efficiency on those operating in the gas and electricity sectors.
- 5 Creating conditions to develop and promote a market for energy services (ESCOs).
- 6 Requirements on metering and billing



Photos: Ian Britton

This directive seeks to deliver economic, environmental, competitiveness and innovation benefits, by reducing the amounts of energy required to deliver energy services to European citizens and businesses. It has been adopted under the Article in the current European Treaty covering environmental protection.

### PREAMBLE

As with all EU directives, the 33 paragraph preamble is part of the formal legal text. It outlines why the European Parliament and the European Council of Ministers have adopted the directive, and states the benefits from improved energy efficiency. First of all, it contributes to security of energy supply, by managing overall demand. By exploring cost-effective savings in an economically efficient way, it helps the Community reduce its dependence on energy imports.

A move towards more energy efficient technologies and techniques also boosts innovation and competitiveness, as underlined in the Lisbon strategy. By reducing greenhouse gases, the directive helps achieve the objective in the UN Framework Convention on Climate Change, of stabilising greenhouse gas concentrations.

It is wholly consistent with the directives promoting the internal market in electricity and natural gas, by providing for energy efficiency and demand side management as alternatives to new supply. This is particularly valuable as liberalisation has yet to lead to significant competition in products and services which result in improved demand side energy efficiency.

# Main Articles

**Article 1 explains the purpose of the directive. It is to enhance the cost-effective improvement of energy end-use efficiency in the EU25 by two mechanisms.**

A The directive requires minimum national indicative energy savings targets to be set and demands that institutional, financial and legal barriers to energy efficiency are removed. It also provides incentives and other mechanisms, to help remove existing market barriers and imperfections that impede energy efficiency.

B It creates conditions to develop and promote a market for energy services, together with delivering other energy efficiency improvement measures to help final customers.

**Article 2 sets out to whom the directive applies. There are three categories:**

A Providers of energy efficiency measures, energy distributors, distribution system operators and retail energy sales companies. Governments can exclude smaller companies from applying Articles 6 and 13 {FOOTNOTE 1}.

B Every energy user - apart from those already involved with the EU carbon emissions trading scheme.

C The armed forces, but only when irrelevant to military action

**Article 3** provides a set of precise definitions of the following 19 words or phrases: energy; energy efficiency; energy efficiency improvement; energy savings; energy service; energy efficiency mechanisms; energy efficiency improvement programmes; energy efficiency improvement measures; an energy service company; energy performance contracting; third-party financing; energy audit; financial instruments for energy savings; final customer; energy distributor; distribution system operator; retail energy sales company; small distributor, small distribution system operator and small retail energy sales company; and white certificates {FOOTNOTE 2}.

Energy is defined as all forms of commercially available energy, including electricity, natural gas, liquefied petroleum gas, any fuel for heating and cooling (including district heating and cooling), coal and lignite, peat, transport fuels (except aviation and bunker fuels), and biomass.

**Article 4 sets national indicative energy savings targets**

A Beginning in 2008, each government shall aim to achieve in 2017 an overall 9% indicative energy savings target, to be achieved via cost-effective, practicable and reasonable measures.

The target is to be set and calculated in accordance with Annexes I to IV.

B By 30 June 2007, governments must set an interim target for 2011, upon the realism of which the Commission will give a formal opinion. Responsibility for oversight, verification and reporting will be given to one or more new or existing authorities or agencies, as designated by governments. After 2011, the Commission may promote a directive to further develop white certificates.

**Article 5 addresses energy end-use efficiency in the public sector.** It requires each government to be effective in telling consumers about the exemplary role and actions of the public sector in saving energy. This will include guidelines for using energy savings as an assessment criterion in competitive tendering for public contracts. In addition the Public Sector in Member States must select two mandatory measures from a list in Annex VI, requiring energy-efficient public procurement, energy audits and energy performance contracting. Such actions can be taken at any level of government, and may include laws and/or voluntary agreements, and should concentrate upon the most cost-effective measures. Designated agencies - which may be those appointed under Article 4, - will be responsible for ensuring the public sector fulfils its exemplary role. These agencies must co-operate with the Commission in the promotion of awareness of best energy saving practices, including on public procurement.

**Article 6 covers energy distributors, distribution system operators and retail energy sales companies.** It requires governments to ensure that such entities offer aggregated statistical information annually regarding their final customers, to the agencies designated under Article 4 (or equivalent organisations). It must be sufficiently detailed to properly design and implement energy saving programmes. It must include current information on end-user consumption, including, where applicable, load profiles, customer segmentation and geographical location of customers. This should respect commercially sensitive information. It may include historic data. These businesses must not do anything to hinder the development of, or impede the market for, the delivery of energy efficiency. Governments must step in to stop any such practices. They must also ensure that any responsibilities placed upon distribution system operators are consistent with the "unbundling" {FOOTNOTE 3} requirements of market liberalisation.

FOOTNOTE 1 "Small distributors" are companies employing fewer than 10 persons, or turning over less than 2 million euros a year, or distributing or selling less than 75 GWh each year.

FOOTNOTE 2 "White certificates" are a means of providing a fungible and tradable value to energy savings beyond the purely monetary. Such certificates are issued by independent certifying bodies.

FOOTNOTE 3 "Unbundling" refers to the process of eliminating cross-subsidies between generation, transmission and distribution of electricity and natural gas.

*Back in 1998 the Council of Ministers endorsed a Community target to reduce energy intensity by an additional 1% each year to 2010. This has prompted the requirement in the directive for governments to adopt national indicative targets to achieve at minimum equivalent savings over nine years from 2008: higher national targets can readily be set.*

*The benefits accruing from the spread of energy service contracts, including third party financing (Energy Performance Contracting), are highlighted. The public sector is to set a good example, and is encouraged to integrate energy efficiency improvements into its investments, depreciation allowances and operating budgets, as well as within its tendering processes. It can also stimulate*

*further action via involving employees and publicising "its exemplary role" to citizens.*

*Any voluntary agreements covered by this directive should be transparent, and cover specific objectives, monitoring and reporting. The importance of better metering and more informative billing is highlighted, as a means of enabling customers to make better informed decisions in respect of their energy consumption. This includes electronic metering including accurate calorimeters. As well as historic and comparable consumer information, advice on energy saving measures - including "Factor Four" or similar equipment - can be provided. Consumers should be actively encouraged to check their own meter readings regularly.*

Governments will ensure that these businesses do one or more of the following:

- Offer competitively priced energy services to customers
- Offer their customers competitively priced energy audits, and/or energy efficiency improvements
- Make finance, equivalent to delivering the above, available to fund energy audits (see Article 11).

Either additionally or alternatively, governments must separately set up schemes which deliver the same type of benefits as above through either voluntary agreements and/or other market-oriented schemes such as white certificates. Details of such schemes must have clear and unambiguous objectives; they must be made publicly available prior to introduction, with other stakeholders encouraged to comment. Governments must ensure that there are sufficient incentives, and a level competitive playing-field, to ensure that any organisation can offer and implement energy services, energy audits and improvement measures.

**Article 7 deals with the availability of information.** Governments must make sure that there is wide knowledge and understanding of precisely how they plan to meet their 9% savings targets by 2017. They must also make sure that the appropriate conditions and incentives are available to ensure there is widespread information and advice around on how to save energy. In turn, the Commission must ensure the widespread dissemination of best energy-saving practices in Member States.

**Article 8 requires governments, where they consider it necessary, to ensure the availability of appropriate qualifications, accreditation and certification schemes for the providers of energy services, energy audits and energy efficiency improvement schemes.**

**Article 9 covers financial instruments for energy savings.** Governments must make sure no legislation exists that unnecessarily or disproportionately impedes or restricts the use of financial instruments for energy savings - unless these are of a clearly fiscal nature. Governments (or their agents) must offer model contracts for financial instruments for energy efficiency improvements.

**Article 10 requires governments to remove any tariff incentives** which unnecessarily increase the volume of transmitted or distributed energy. They can impose public service obligations regarding energy efficiency on those operating in the gas and electricity sectors.

**Article 11 allows governments to create energy efficiency subsidy funds which are open to any company.** If created, these must include promoting energy auditing, financial instruments for energy savings, and (where appropriate) improved metering and informative billing. They must target end-use sectors with higher transaction costs and higher risks. They can offer loans, grants or financial guarantees, so long as they do not compete with commercially-financed energy efficiency improvement measures. It is up to governments to decide which consumers should benefit.

**Article 12 concerns energy audits.** Governments must ensure the availability of efficient, high-quality energy audit schemes for all customers, regardless of size. These should identify improvement measures, and be carried out in an independent manner. For those market sectors that have higher transaction costs, and in non-complex facilities, governments may permit the use of questionnaires and computer programmes, made available either by post or via the Internet. Certificates issued under Article 7 of the Energy Performance of Buildings Directive are deemed to satisfy the energy audit requirement, as are audits undertaken under government recognised voluntary agreements.

**Article 13** requires Governments to ensure that customers have meters that provide actual overall and time-of-use consumption levels. Such meters must always be installed for new or refurbished buildings, or when an existing meter is replaced - although such provision

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must be "financially reasonable and proportionate to the potential energy savings".

It also requires governments to ensure that all energy bills are provided frequently, based on actual consumption, and easily comprehensible. The bill should also, where appropriate, provide information on past consumption levels and comparable premises, together with contact details including websites for consumer and energy efficiency advice agencies.

**Article 14** sets out the requirements for national Energy Efficiency Action Plans (EEAPs). The first must be submitted by June 30 2007, with subsequent plans by June 30 2011, and June 30 2014. All will be formally reviewed by the Commission within six months, pointing out both best practice and where improvements are needed. The EEAPs must describe the measures to reach the 9% indicative targets; the 2007 report must contain an intermediate target for 2011. The later reports will analyse progress to date, if necessary setting out additional measures to address any shortfalls on the target, increasingly using harmonised efficiency indicators and benchmarks, to evaluate both past and future performance. From 2012 the Commission can propose extending the period of application for targets. If insufficient progress has been made, these should address the level and nature of the targets.

**Article 15** provides for technical review of the contents of Annexes II to V. The Commission will ensure any necessary adaptations take place before the start of 2008, and again by the start of 2012. By the latter date, a significantly higher percentage of calculations, based on the installation of individual energy saving measures, must be in place. By June 30 2008 the Commission will have developed a set of harmonised energy efficiency indicators and benchmarks, and will publish a progress report by May 17 2011.

**Article 16** creates a subcommittee of the existing European Commission Energy Demand Management committee. It is made up of representatives of each EU government, both administrative and specialist, possibly together with independent observers.

{**Article 17** repeals the entire SAVE directive "to limit carbon dioxide emissions by improving energy efficiency" 1993/76/EEC.}

**Article 18** requires all governments to introduce laws, regulations and administrative provisions necessary to comply with this directive by May 17 2008. However the legal provisions for the national EEAPs (referred to in Article 14) were due by May 17 2006 and the first such plans are required by June 30 2007.



## ANNEXES

The directive contains six Annexes (see Article 15). These set out:

**I** The methodology for calculating the national indicative energy savings target (Article 4)

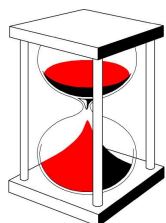
**II** A conversion table detailing the energy content of fuels in kilojoules, kilogrammes of oil equivalent, and kilowatt hours

**III** An indicative list of examples of eligible energy efficiency improvement measures, covering the buildings sector, industry, surface transport, cross-sectoral measures (e.g. standards and norms to improve energy efficiency including in buildings, energy labelling schemes, intelligent metering systems) and "horizontal" measures (e.g. regulations, taxes, information campaigns).

**IV** A general framework for measurement and verification of energy savings. This covers measuring energy savings via top-down and bottom-up calculations, and how energy savings should be normalised; the data and methods that may be used; how to deal with uncertainty; consistent measurement of the longevity of each energy saving measure, to be finalised by 17 November 2006; how to deal with the multiplier effect of energy savings, and how to avoid double counting in mixed top-down and bottom-up calculations; and how to verify energy savings.

**V** An indicative list of markets for which benchmarks can be calculated. These include the markets for: appliances, information technology and lighting for households; domestic heating technology, including heating, ventilation, heat insulation, air-conditioning and windows; industrial ovens; motorised power in industry; public sector institutions; and transport services.

**VI** A list of eligible energy efficient public procurement measures (see Article 5). This includes acquisition, replacement or retrofitting energy consuming equipment, vehicles and buildings - both purchased or rented.



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