

Directive 2010/31/EU of the European Parliament and of the Council
of 19 May 2010 on the energy performance of buildings (recast)

DIRECTIVE 2010/31/EU OF THE EUROPEAN
PARLIAMENT AND OF THE COUNCIL

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on the energy performance of buildings

(recast)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 194(2) thereof,

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Economic and Social Committee⁽¹⁾,

Having regard to the opinion of the Committee of the Regions⁽²⁾,

Acting in accordance with the ordinary legislative procedure⁽³⁾,

Whereas:

- (1) Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings⁽⁴⁾ has been amended⁽⁵⁾. Since further substantive amendments are to be made, it should be recast in the interests of clarity.
- (2) An efficient, prudent, rational and sustainable utilisation of energy applies, inter alia, to oil products, natural gas and solid fuels, which are essential sources of energy, but also the leading sources of carbon dioxide emissions.
- (3) Buildings account for 40 % of total energy consumption in the Union. The sector is expanding, which is bound to increase its energy consumption. Therefore, reduction of energy consumption and the use of energy from renewable sources in the buildings sector constitute important measures needed to reduce the Union's energy dependency and greenhouse gas emissions. Together with an increased use of energy from renewable sources, measures taken to reduce energy consumption in the Union would allow the Union to comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), and to honour both its long term commitment to maintain the global temperature rise below 2 °C, and its commitment to reduce, by 2020, overall greenhouse gas emissions by at least 20 % below 1990 levels, and by 30 % in the event of an international agreement being reached. Reduced energy consumption and an increased use of energy from renewable sources also have an important part to play in promoting security of energy supply, technological developments and in creating opportunities for employment and regional development, in particular in rural areas.

- (4) Management of energy demand is an important tool enabling the Union to influence the global energy market and hence the security of energy supply in the medium and long term.
- (5) The European Council of March 2007 emphasised the need to increase energy efficiency in the Union so as to achieve the objective of reducing by 20 % the Union's energy consumption by 2020 and called for a thorough and rapid implementation of the priorities established in the Commission Communication entitled 'Action plan for energy efficiency: realising the potential'. That action plan identified the significant potential for cost-effective energy savings in the buildings sector. The European Parliament, in its resolution of 31 January 2008, called for the strengthening of the provisions of Directive 2002/91/EC, and has called at various times, on the latest occasion in its resolution of 3 February 2009 on the Second Strategic Energy Review, for the 20 % energy efficiency target in 2020 to be made binding. Moreover, Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020⁽⁶⁾, sets national binding targets for CO₂ reduction for which energy efficiency in the building sector will be crucial, and Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources⁽⁷⁾ provides for the promotion of energy efficiency in the context of a binding target for energy from renewable sources accounting for 20 % of total Union energy consumption by 2020.
- (6) The European Council of March 2007 reaffirmed the Union's commitment to the Union-wide development of energy from renewable sources by endorsing a mandatory target of a 20 % share of energy from renewable sources by 2020. Directive 2009/28/EC establishes a common framework for the promotion of energy from renewable sources.
- (7) It is necessary to lay down more concrete actions with a view to achieving the great unrealised potential for energy savings in buildings and reducing the large differences between Member States' results in this sector.
- (8) Measures to improve further the energy performance of buildings should take into account climatic and local conditions as well as indoor climate environment and cost-effectiveness. These measures should not affect other requirements concerning buildings such as accessibility, safety and the intended use of the building.
- (9) The energy performance of buildings should be calculated on the basis of a methodology, which may be differentiated at national and regional level. That includes, in addition to thermal characteristics, other factors that play an increasingly important role such as heating and air-conditioning installations, application of energy from renewable sources, passive heating and cooling elements, shading, indoor air-quality, adequate natural light and design of the building. The methodology for calculating energy performance should be based not only on the season in which heating is required, but should cover the annual energy performance of a building. That methodology should take into account existing European standards.

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- (10) It is the sole responsibility of Member States to set minimum requirements for the energy performance of buildings and building elements. Those requirements should be set with a view to achieving the cost-optimal balance between the investments involved and the energy costs saved throughout the lifecycle of the building, without prejudice to the right of Member States to set minimum requirements which are more energy efficient than cost-optimal energy efficiency levels. Provision should be made for the possibility for Member States to review regularly their minimum energy performance requirements for buildings in the light of technical progress.
- (11) The objective of cost-effective or cost-optimal energy efficiency levels may, in certain circumstances, for example in the light of climatic differences, justify the setting by Member States of cost-effective or cost-optimal requirements for building elements that would in practice limit the installation of building products that comply with standards set by Union legislation, provided that such requirements do not constitute an unjustifiable market barrier.
- (12) When setting energy performance requirements for technical building systems, Member States should use, where available and appropriate, harmonised instruments, in particular testing and calculation methods and energy efficiency classes developed under measures implementing Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products⁽⁸⁾ and Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products⁽⁹⁾, with a view to ensuring coherence with related initiatives and minimise, to the extent possible, potential fragmentation of the market.
- (13) This Directive is without prejudice to Articles 107 and 108 of the Treaty on the Functioning of the European Union (TFEU). The term ‘incentive’ used in this Directive should not therefore be interpreted as constituting State aid.
- (14) The Commission should lay down a comparative methodology framework for calculating cost-optimal levels of minimum energy performance requirements. Member States should use this framework to compare the results with the minimum energy performance requirements which they have adopted. Should significant discrepancies, i.e. exceeding 15 %, exist between the calculated cost-optimal levels of minimum energy performance requirements and the minimum energy performance requirements in force, Member States should justify the difference or plan appropriate steps to reduce the discrepancy. The estimated economic lifecycle of a building or building element should be determined by Member States, taking into account current practices and experience in defining typical economic lifecycles. The results of this comparison and the data used to reach these results should be regularly reported to the Commission. These reports should enable the Commission to assess and report on the progress of Member States in reaching cost-optimal levels of minimum energy performance requirements.
- (15) Buildings have an impact on long-term energy consumption. Given the long renovation cycle for existing buildings, new, and existing buildings that are subject to major

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renovation, should therefore meet minimum energy performance requirements adapted to the local climate. As the application of alternative energy supply systems is not generally explored to its full potential, alternative energy supply systems should be considered for new buildings, regardless of their size, pursuant to the principle of first ensuring that energy needs for heating and cooling are reduced to cost-optimal levels.

- (16) Major renovations of existing buildings, regardless of their size, provide an opportunity to take cost-effective measures to enhance energy performance. For reasons of cost-effectiveness, it should be possible to limit the minimum energy performance requirements to the renovated parts that are most relevant for the energy performance of the building. Member States should be able to choose to define a ‘major renovation’ either in terms of a percentage of the surface of the building envelope or in terms of the value of the building. If a Member State decides to define a major renovation in terms of the value of the building, values such as the actuarial value, or the current value based on the cost of reconstruction, excluding the value of the land upon which the building is situated, could be used.
- (17) Measures are needed to increase the number of buildings which not only fulfil current minimum energy performance requirements, but are also more energy efficient, thereby reducing both energy consumption and carbon dioxide emissions. For this purpose Member States should draw up national plans for increasing the number of nearly zero-energy buildings and regularly report such plans to the Commission.
- (18) Union financial instruments and other measures are being put into place or adapted with the aim of stimulating energy efficiency-related measures. Such financial instruments at Union level include, inter alia, Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund⁽¹⁰⁾, amended to allow increased investments in energy efficiency in housing; the public-private partnership on a ‘European energy-efficient buildings’ initiative to promote green technologies and the development of energy-efficient systems and materials in new and renovated buildings; the EC-European Investment Bank (EIB) initiative ‘EU sustainable energy financing initiative’ which aims to enable, inter alia, investments for energy efficiency and the EIB-led ‘Marguerite Fund’: the 2020 European Fund for Energy, Climate Change and Infrastructure; Council Directive 2009/47/EC of 5 May 2009 amending Directive 2006/112/EC as regards reduced rates of value added tax⁽¹¹⁾, structural and cohesion funds instrument Jeremie (Joint European Resources for micro to medium enterprises); the Energy Efficiency Finance Facility; the Competitiveness and Innovation Framework Programme including the Intelligent Energy Europe II Programme focused specifically on removing market barriers related to energy efficiency and energy from renewable sources through for example the technical assistance facility ELENA (European Local Energy Assistance); the Covenant of Mayors; the Entrepreneurship and Innovation programme; the ICT Policy Support Programme 2010, and the Seventh Research Framework Programme. The European Bank for Reconstruction and Development also provides funding with the aim of stimulating energy-efficiency-related measures.

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- (19) Union financial instruments should be used to give practical effect to the objectives of this Directive, without however substituting national measures. In particular, they should be used for providing appropriate and innovative means of financing to catalyse investment in energy efficiency measures. They could play an important role in the development of national, regional and local energy efficiency funds, instruments, or mechanisms, which deliver such financing possibilities to private property owners, to small and medium-sized enterprises and to energy efficiency service companies.
- (20) In order to provide the Commission with adequate information, Member States should draw up lists of existing and proposed measures, including those of a financial nature, other than those required by this Directive, which promote the objectives of this Directive. The existing and proposed measures listed by Member States may include, in particular, measures that aim to reduce existing legal and market barriers and encourage investments and/or other activities to increase the energy efficiency of new and existing buildings, thus potentially contributing to reducing energy poverty. Such measures could include, but should not be limited to, free or subsidised technical assistance and advice, direct subsidies, subsidised loan schemes or low interest loans, grant schemes and loan guarantee schemes. The public authorities and other institutions which provide those measures of a financial nature could link the application of such measures to the indicated energy performance and the recommendations from energy performance certificates.
- (21) In order to limit the reporting burden on Member States it should be possible to integrate the reports required by this Directive into the Energy Efficiency Action Plans referred to in Article 14(2) of Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services⁽¹²⁾. The public sector in each Member State should lead the way in the field of energy performance of buildings, and therefore the national plans should set more ambitious targets for the buildings occupied by public authorities.
- (22) The prospective buyer and tenant of a building or building unit should, in the energy performance certificate, be given correct information about the energy performance of the building and practical advice on improving such performance. Information campaigns may serve to further encourage owners and tenants to improve the energy performance of their building or building unit. Owners and tenants of commercial buildings should also be encouraged to exchange information regarding actual energy consumption, in order to ensure that all the data are available to make informed decisions about necessary improvements. The energy performance certificate should also provide information about the actual impact of heating and cooling on the energy needs of the building, on its primary energy consumption and on its carbon dioxide emissions.
- (23) Public authorities should lead by example and should endeavour to implement the recommendations included in the energy performance certificate. Member States should include within their national plans measures to support public authorities to become early adopters of energy efficiency improvements and to implement the recommendations included in the energy performance certificate as soon as feasible.

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- (24) Buildings occupied by public authorities and buildings frequently visited by the public should set an example by showing that environmental and energy considerations are being taken into account and therefore those buildings should be subject to energy certification on a regular basis. The dissemination to the public of information on energy performance should be enhanced by clearly displaying these energy performance certificates, in particular in buildings of a certain size which are occupied by public authorities or which are frequently visited by the public, such as shops and shopping centres, supermarkets, restaurants, theatres, banks and hotels.
- (25) Recent years have seen a rise in the number of air-conditioning systems in European countries. This creates considerable problems at peak load times, increasing the cost of electricity and disrupting the energy balance. Priority should be given to strategies which enhance the thermal performance of buildings during the summer period. To that end, there should be focus on measures which avoid overheating, such as shading and sufficient thermal capacity in the building construction, and further development and application of passive cooling techniques, primarily those that improve indoor climatic conditions and the micro-climate around buildings.
- (26) Regular maintenance and inspection of heating and air-conditioning systems by qualified personnel contributes to maintaining their correct adjustment in accordance with the product specification and in that way ensures optimal performance from an environmental, safety and energy point of view. An independent assessment of the entire heating and air-conditioning system should occur at regular intervals during its lifecycle in particular before its replacement or upgrading. In order to minimise the administrative burden on building owners and tenants, Member States should endeavour to combine inspections and certifications as far as possible.
- (27) A common approach to the energy performance certification of buildings and to the inspection of heating and air-conditioning systems, carried out by qualified and/or accredited experts, whose independence is to be guaranteed on the basis of objective criteria, will contribute to a level playing field as regards efforts made in Member States to energy saving in the buildings sector and will introduce transparency for prospective owners or users with regard to energy performance in the Union property market. In order to ensure the quality of energy performance certificates and of the inspection of heating and air-conditioning systems throughout the Union, an independent control mechanism should be established in each Member State.
- (28) Since local and regional authorities are critical for the successful implementation of this Directive, they should be consulted and involved, as and when appropriate in accordance with applicable national legislation, on planning issues, the development of programmes to provide information, training and awareness-raising, and on the implementation of this Directive at national or regional level. Such consultations may also serve to promote the provision of adequate guidance to local planners and building inspectors to carry out the necessary tasks. Furthermore, Member States should enable and encourage architects and planners to properly consider the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use

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of district heating and cooling when planning, designing, building and renovating industrial or residential areas.

- (29) Installers and builders are critical for the successful implementation of this Directive. Therefore, an adequate number of installers and builders should, through training and other measures, have the appropriate level of competence for the installation and integration of the energy efficient and renewable energy technology required.
- (30) Member States should take account of Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications⁽¹³⁾ with regard to the mutual recognition of professional experts which are addressed by this Directive, and the Commission should continue its activities under the Intelligent Energy Europe Programme on guidelines and recommendations for standards for the training of such professional experts.
- (31) In order to enhance the transparency of energy performance in the Union's non-residential property market, uniform conditions for a voluntary common certification scheme for the energy performance of non-residential buildings should be established. In accordance with Article 291 TFEU, rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers shall be laid down in advance by a regulation adopted in accordance with the ordinary legislative procedure. Pending the adoption of that new regulation, Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission⁽¹⁴⁾ continues to apply, with the exception of the regulatory procedure with scrutiny, which is not applicable.
- (32) The Commission should be empowered to adopt delegated acts in accordance with Article 290 TFEU in respect of the adaptation to technical progress of certain parts of the general framework set out in Annex I, and in respect of the establishment of a methodology framework for calculating cost-optimal levels of minimum energy performance requirements. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level.
- (33) Since the objective of this Directive, namely of enhancing the energy performance of buildings, cannot be sufficiently achieved by the Member States, due to the complexity of the buildings sector and the inability of the national housing markets to adequately address the challenges of energy efficiency, and can by the reason of the scale and the effects of the action be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principles of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.
- (34) The obligation to transpose this Directive into national law should be confined to those provisions which represent a substantive change as compared with Directive 2002/91/EC. The obligation to transpose the provisions which are unchanged arises under that Directive.

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- (35) This Directive should be without prejudice to the obligations of the Member States relating to the time limits for transposition into national law and application of the Directive 2002/91/EC.
- (36) In accordance with point 34 of the Interinstitutional Agreement on better law-making⁽¹⁵⁾, Member States are encouraged to draw up, for themselves and in the interest of the Union, their own tables, illustrating, as far as possible, the correlation between this Directive and the transposition measures, and to make them public,

HAVE ADOPTED THIS DIRECTIVE:

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- (1) [OJ C 277, 17.11.2009, p. 75.](#)
- (2) [OJ C 200, 25.8.2009, p. 41.](#)
- (3) Position of the European Parliament of 23 April 2009 (not yet published in the Official Journal), position of the Council at first reading of 14 April 2010 (not yet published in the Official Journal), position of the European Parliament of 18 May 2010 (not yet published in the Official Journal).
- (4) [OJ L 1, 4.1.2003, p. 65.](#)
- (5) See Annex IV, Part A.
- (6) [OJ L 140, 5.6.2009, p. 136.](#)
- (7) [OJ L 140, 5.6.2009, p. 16.](#)
- (8) [OJ L 285, 31.10.2009, p. 10.](#)
- (9) See page 1 of this Official Journal.
- (10) [OJ L 210, 31.7.2006, p. 1.](#)
- (11) [OJ L 116, 9.5.2009, p. 18.](#)
- (12) [OJ L 114, 27.4.2006, p. 64.](#)
- (13) [OJ L 255, 30.9.2005, p. 22.](#)
- (14) [OJ L 184, 17.7.1999, p. 23.](#)
- (15) [OJ C 321, 31.12.2003, p. 1.](#)