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REPORT

on the proposal for a directive of the European Parliament and of the Council amending directive 2010/31/EU on the energy performance of buildings (COM(2016)0765 – C8-0499/2016 – 2016/0381(COD))

Committee on Industry, Research and Energy

Rapporteur: Bendt Bendtsen

Symbols for procedures

*	Consultation procedure
***	Consent procedure
***I	Ordinary legislative procedure (first reading)
***II	Ordinary legislative procedure (second reading)
***III	Ordinary legislative procedure (third reading)

(The type of procedure depends on the legal basis proposed by the draft act.)

Amendments to a draft act

Amendments by Parliament set out in two columns

Deletions are indicated in ***bold italics*** in the left-hand column. Replacements are indicated in ***bold italics*** in both columns. New text is indicated in ***bold italics*** in the right-hand column.

The first and second lines of the header of each amendment identify the relevant part of the draft act under consideration. If an amendment pertains to an existing act that the draft act is seeking to amend, the amendment heading includes a third line identifying the existing act and a fourth line identifying the provision in that act that Parliament wishes to amend.

Amendments by Parliament in the form of a consolidated text

New text is highlighted in ***bold italics***. Deletions are indicated using either the ▌ symbol or strikeout. Replacements are indicated by highlighting the new text in ***bold italics*** and by deleting or striking out the text that has been replaced.
By way of exception, purely technical changes made by the drafting departments in preparing the final text are not highlighted.

CONTENTS

Page

DRAFT EUROPEAN PARLIAMENT LEGISLATIVE RESOLUTION

on the proposal for a directive of the European Parliament and of the Council amending directive 2010/31/EU on the energy performance of buildings
(COM(2016)0765 – C8-0499/2016 – 2016/0381(COD))

(Ordinary legislative procedure: first reading)

The European Parliament,

– having regard to the Commission proposal to Parliament and the Council (COM(2016)0765),

– having regard to Article 294(2) and Article 194(2) of the Treaty on the Functioning of the European Union, pursuant to which the Commission submitted the proposal to Parliament (C8-0499/2016),

– having regard to Article 294(3) of the Treaty on the Functioning of the European Union,

– having regard to the reasoned opinions submitted, within the framework of the Protocol No 2 on the application of the principles of subsidiarity and proportionality, by the Dutch Senate and by the Dutch House of Representatives,

– having regard to the European Economic and Social Committee, of 26 April 2017[1],

– having regard to the opinion of the Committee of the Regions of 13 July 2017[2],

– having regard to Rule 59 of its Rules of Procedure,

– having regard to the report of the Committee on Industry, Research and Energy and the opinion of the Committee on the Environment, Public Health and Food Safety (A8-0314/2017),

1. Adopts its position at first reading hereinafter set out;

2. Calls on the Commission to refer the matter to Parliament again if it replaces, substantially amends or intends to substantially amend its proposal;

3. Instructs its President to forward its position to the Council, the Commission and the national parliaments.

Amendment 1

Proposal for a directive
Recital 1

[1] OJ C 246, 28.7.2017, p. 48.
[2] OJ C 342, 12.10.2017, p. 119.

Text proposed by the Commission	*Amendment*
(1) The Union is committed to a sustainable, competitive, secure and decarbonised energy system. The Energy Union and the Energy and Climate Policy Framework for 2030 establish ambitious Union commitments to reduce greenhouse gas emissions further (by ***at least 40*** % by ***2030***, as compared with 1990), to increase the proportion of renewable energy consumed ***(by at least 27 %)*** and to make energy savings ***of at least 27 %***, ***reviewing this level having in mind an Union level of 30 %[10]***, and to improve Europe's energy security, competitiveness and sustainability.	(1) The Union is committed to a sustainable, competitive, secure and decarbonised energy system ***and to a high level of human health protection***. The Energy Union and the Energy and Climate Policy Framework for 2030 establish ambitious Union commitments to reduce greenhouse gas emissions further (by ***80 to 95*** % by ***2050***, as compared with 1990), to increase the proportion of renewable energy consumed ***in accordance with Directive .../2018/EU [on the promotion of the use of energy from renewable sources, COD (2016)0382]*** and to make energy savings ***in accordance with Directive 2012/27/EU as amended by Directive .../2018/EU [COD 2016/0376]*** and to improve Europe's energy security, competitiveness, ***affordability*** and sustainability.

Amendment 2

Proposal for a directive
Recital 6

Text proposed by the Commission	*Amendment*
(6) The Union is committed to developing a secure, competitive and decarbonised energy system by 2050***[12]***. To ***meet*** this goal, ***Member States and investors need milestones to ensure that buildings are decarbonised by 2050. In order to ensure this*** decarbonised ***building stock*** by 2050, Member States ***should identify the intermediary steps to achieving the*** mid-term ***(2030***) and long-term (2050) objectives.	(6) The Union is committed to developing a secure, competitive and decarbonised energy system by 2050. To ***achieve*** this goal, ***it is vital that the existing building stock, which is responsible for about 36 % of all CO^2 emissions in the Union, is highly energy efficient and*** decarbonised ***up to nearly zero-energy standard*** by 2050***. Member States should seek a cost-efficient equilibrium between decarbonising energy supplies and reducing final energy consumption. To that end,*** Member States ***and investors need a clear vision to guide their policies and investment decisions, which includes well-defined national milestones and actions for energy***

efficiency to achieve the short-term (2030), mid-term ***(2040***) and long-term (2050) objectives.

[12] Communication on an Energy roadmap 2050, (COM(2011) 885 final).

Amendment 3

Proposal for a directive
Recital 6 a (new)

Text proposed by the Commission	*Amendment*
	(6a) The 2015 Paris Agreement on climate change following the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21) must be reflected in the Union's efforts to decarbonise its building stock. Taking into account that almost 50 % of Union's final energy is used for heating and cooling, of which 80 % is used in buildings, achievement of Union's energy and climate goals strongly depends on the Union's efforts to refurbish its building stocks by giving priority to energy efficiency and savings, making full use of the 'energy efficiency first' principle as well as ensuring effective deployment of renewables.

Amendment 4

Proposal for a directive
Recital 7

Text proposed by the Commission	*Amendment*
(7) The provisions on long-term renovation strategies provided for in Directive 2012/27/EU of the European Parliament and of the Council[13] should be moved to Directive 2010/31/EU, where	(7) The provisions on long-term renovation strategies provided for in Directive 2012/27/EU of the European Parliament and of the Council should be moved to Directive 2010/31/EU, where they fit more coherently***, and updated to***

they fit more coherently.	***clarify the ambitions of a highly energy efficient and decarbonised building stock. The long-term renovation strategies and the renovations they stimulate will boost growth and competitiveness through the creation of local, non-outsourceable jobs, and provide citizens with energy efficient, healthy and safe buildings***.

Amendment 5

Proposal for a directive
Recital 7 a (new)

Text proposed by the Commission	*Amendment*
	(7a) To facilitate the cost effective achievement of the Union's climate and energy goals as well as cost-efficient renovations in buildings, national long-term renovation strategies should integrate considerations for improvements to health and indoor climate, including by combining renovation with the removal of asbestos and other harmful substances, preventing the illegal removal of harmful substances, and facilitating compliance with existing legislative acts such as Directive 2009/148/EC[1a] and Directive (EU) 2016/2284[1b].
	[1a]Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.
	[1b] Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

Amendment 6

Proposal for a directive
Recital 7 b (new)

Text proposed by the Commission	*Amendment*
	(7b) To achieve a highly energy efficient and decarbonised building stock, and to ensure that the long-term renovation strategies will deliver the necessary progress, in particular by an increase in deep renovations, Member States must offer clear guidelines and outline measurable, targeted actions, including for the worst performing segments of the national building stock, for energy-poor consumers, for social housing and for households subject to split-incentive dilemmas, while taking into consideration affordability. To further support the necessary improvements in the national rental stock, Member States should consider the introduction or continued application of requirements for a certain level of energy performance, according to the energy performance certificates, for rental properties.

Amendment 7

Proposal for a directive
Recital 7 c (new)

Text proposed by the Commission	*Amendment*
	(7 c) Taking into account the Commission's impact assessment, specifying that renovation would be needed at an average rate of 3 % to cost-effectively accomplish the Union's ambitions for energy efficiency, it is essential that Member States specify their expected output and contribution to achieving the overall energy efficiency target(s) in 2030 of [X %], in accordance with Directive 2012/27/EU as amended by Directive .../2018/EU [COD 2016/0376] ,

taking into account that every 1 % increase in energy savings reduces gas imports by 2,6 % and thereby contributes actively to the Union's energy independence.

Amendment 8

Proposal for a directive
Recital 7 d (new)

Text proposed by the Commission	*Amendment*
	(7d) Ambitious goals for deep renovation of the existing building stock will create millions of jobs in the Union, in particular in small and medium-sized enterprises. In that context, it is necessary for Member States to provide a clear link between their national long-term renovation strategies and adequate initiatives to promote skills development and education in the construction and energy efficiency sectors.

Amendment 9

Proposal for a directive
Recital 8

Text proposed by the Commission	*Amendment*
(8) The agendas of the Digital Single Market and the Energy Union should be aligned and serve common goals. The digitalisation of the energy system is quickly changing the energy landscape, from the integration of renewables to smart grids and smart-ready buildings. In order to digitise the building sector, targeted incentives should be provided to promote smart-ready systems and digital solutions in the built environment.	(8) The agendas of the Digital Single Market and the Energy Union should be aligned and serve common goals. The digitalisation of the energy system is quickly changing the energy landscape, from the integration of renewables to smart grids and smart-ready buildings. ***This offers new opportunities for energy savings, by providing consumers with more accurate information about their consumption patterns, and by enabling the system operator to better manage the grid.*** In order to digitise the building sector ***and promote a systemic development of smart cities***, targeted incentives should be

provided to promote ***suitable and*** smart-ready systems and digital solutions in the built environment ***while taking into account the less digitally engaged consumers. Those incentives should take into account the Union's connectivity targets and ambitions for deployment on high-capacity communication networks, which are a prerequisite for smart homes and well-connected communities, also ensuring that the development of such networks is not hampered by building solutions that might negatively affect connectivity.***

Amendment 10

Proposal for a directive
Recital 9

Text proposed by the Commission	*Amendment*
(9) In order to adapt this Directive to the technical progress, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission to supplement it by defining the smartness indicator and enabling its implementation. The smartness indicator should be used to measure buildings' capacity to use ICT and electronic systems to optimise operation and interact with the grid. The smartness indicator will raise awareness amongst building owners and occupants of the value behind building automation and electronic monitoring of technical building systems and will give confidence to the occupant about the actual savings of these new enhanced-functionalities.	(9) In order to adapt this Directive to the technical progress, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union ***(TFEU)*** should be delegated to the Commission to supplement it by defining the smartness indicator and enabling its implementation ***in accordance with the methodology set out in this Directive***. The smartness indicator should be ***coherent with energy performance certificates and should be*** used to measure buildings' capacity to use ICT and electronic systems to optimise operation***, performance, indoor comfort*** and interact with the grid. The smartness indicator will raise awareness amongst building owners and occupants of the value behind building automation and electronic monitoring of technical building systems and will give confidence to the occupant about the actual savings of these new enhanced-functionalities.

Amendment 11

Proposal for a directive
Recital 10

Text proposed by the Commission	*Amendment*
(10) Innovation and new technology also make it possible for buildings to support the overall decarbonisation of the economy. For example, buildings can leverage the development of the infrastructure necessary for the smart charging of electric vehicles also provide a basis for Member States, if they choose to, to use car batteries as a source of power. To reflect this aim, the definition of technical building systems should be extended.	(10) Innovation and new technology also make it possible for buildings to support the overall decarbonisation of the economy***, including the transport sector***. For example, buildings can leverage the development of the infrastructure necessary for ***deployment of*** the smart charging of electric vehicles ***and*** also provide a basis for Member States, if they choose to, to use car batteries as a source of power**.** To reflect this aim, the definition of technical building systems should be extended.

Amendment 12

Proposal for a directive
Recital 10 a (new)

Text proposed by the Commission	*Amendment*
	(10a) Pre-cabling and pre-tubing set the right conditions for the rapid deployment of recharging points if and where needed. Member States should therefore ensure the development of electro-mobility in a balanced and cost-effective way. In particular, where a major renovation touching upon electric infrastructure takes place, adequate roll out of pre-cabling and pre-tubing should follow with a view to providing the sufficient cabling, tubing and electric power within the meaning of Directive 2014/94/EU for the installation of recharging points in parking spaces.

Amendment 13

Proposal for a directive

Recital 10 b (new)

Text proposed by the Commission	*Amendment*
	(10b) A clear vision for a decarbonised building stock by 2050 requires a high level of ambition. When the energy use will be brought closer to zero the share of embodied energy will be more decisive in the whole life-cycle of the buildings. The future vision for a decarbonised building stock should include the embodied energy in buildings. Therefore building with wood is positive for the climate.

Amendment 14

Proposal for a directive
Recital 10 c (new)

Text proposed by the Commission	*Amendment*
	(10c) Research into, and the testing of, new solutions for optimising the energy performance of historical buildings and sites should be encouraged, while also safeguarding and preserving cultural heritage.

Amendment 15

Proposal for a directive
Recital 10 d (new)

Text proposed by the Commission	*Amendment*
	(10d) Member States should take into account that innovation and new technology ask for enhanced investments in education and skills, which are necessary for the successful implementation of such technologies.

Amendment 16

Proposal for a directive

Recital 10 e (new)

Text proposed by the Commission	*Amendment*
	(10e) This Directive can hardly prejudge development and innovation in the field of electronic mobility, buildings or smart systems. Therefore the principle of technology neutrality should apply throughout this Directive.

Amendment 17

Proposal for a directive
Recital 10 f (new)

Text proposed by the Commission	*Amendment*
	(10f) Nature-based solutions, such as well-designed street vegetation, green roofs and walls providing insulation and shade to buildings reduce energy demand by limiting the need for heating and cooling and improving a building's energy performance.

Amendment 18

Proposal for a directive
Recital 10 g (new)

Text proposed by the Commission	*Amendment*
	(10g) The requirements for electro-mobility infrastructure set out in this Directive should form part of a holistic strategic urban planning in Member States to promote alternative, safe and sustainable modes of transport and applying a coherent approach to the electrical infrastructure by providing for example dedicated parking infrastructure for electrical bicycles and for people of reduced mobility.

Amendment 19

Proposal for a directive
Recital 11

Text proposed by the Commission	*Amendment*
(11) The impact assessment identified ***two*** existing ***sets of*** provisions, whose aim could be achieved in a more efficient manner compared to the current situation. ***First the obligation, before any construction starts, to carry out a feasibility study on highly-efficiency alternative systems becomes an unnecessary burden. Second,*** provisions related to inspections of heating systems and air-conditioning systems were found to not sufficiently ensure, in an efficient manner, the initial and maintained performance of these technical systems. ***Even*** cheap technical solutions with very short payback periods, such as hydraulic balancing of the heating system and installation/replacement of thermostatic control valves, are insufficiently considered today. Provisions related to inspections are amended to ensure a better result from inspections.	(11) The impact assessment identified existing provisions, whose aim could be achieved in a more efficient manner compared to the current situation. Provisions related to inspections of heating systems and air-conditioning systems were found to not sufficiently ensure, in an efficient manner, the initial and maintained performance of these technical systems. ***Furthermore,*** cheap technical solutions with very short payback periods, such as hydraulic balancing of the heating system and installation/replacement of thermostatic control valves, are insufficiently considered today ***and should be explored further, including as solutions for assisting energy-poor consumers***. Provisions related to inspections are amended to ensure a better result from inspections.

Amendment 20

Proposal for a directive
Recital 11 a (new)

Text proposed by the Commission	*Amendment*
	(11a) For new buildings, Member States should ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems is taken into account. Such systems could include decentralised energy supply systems based on energy from renewable sources or waste heat; cogeneration; district or block heating or cooling and heat pumps.

Amendment 21

Proposal for a directive
Recital 11 b (new)

Text proposed by the Commission	*Amendment*
	(11b) The 2009 WHO guidelines provide that, concerning indoor air quality, better performing buildings provide higher comfort levels and wellbeing for their occupants and improve health. Thermal bridges, inadequate insulation and unplanned air pathways can result in surface temperatures below the dew point of the air and in dampness. It is therefore essential to ensure a complete and homogeneous insulation of the building including balconies, fenestrations, roofs, walls, doors and floor.

Amendment 22

Proposal for a directive
Recital 12

Text proposed by the Commission	*Amendment*
(12) ***Notably for large installations,*** building automation and electronic monitoring of technical building systems ***have proven to be an effective replacement for inspections. The installation of such equipment should be considered as the most cost-effective alternative to*** inspections in large non-residential and multifamily buildings of a sufficient size that allow a payback of less than three years. The current possibility to opt for alternative measures is therefore deleted. For small scale installations, the documentation of the system performance by installers and the registration of this information in the databases on energy performance certification will support the verification of compliance with the	(12) Building automation***, facility management*** and electronic monitoring of technical building systems ***holds great potential to provide cost-effective and significant energy savings for both consumers and businesses. For large installations in particular, building automation and electronic monitoring of technical building systems have proven to be effective and can, in some cases, replace*** inspections in large non-residential and multifamily buildings of a sufficient size that allow a payback of less than three years ***as it enables acting on the information provided, thereby securing energy savings over time***. The current possibility to opt for alternative measures is therefore deleted***, however it should be***

minimum requirements set for all technical building systems and reinforce energy performance certificates role. In addition, existing regular safety inspections and programmed maintenance work will remain an opportunity to provide direct advice on energy efficiency improvements.	***possible to exempt technical systems explicitly covered by an ESCO programme from the inspection requirement. To avoid double inspections, installations that are operated by a utility or network operator and that are subject to inspections at the system level should be exempt from this requirement.*** For small-scale installations, the documentation of the system performance by installers and the registration of this information in the databases on energy performance certification will support the verification of compliance with the minimum requirements set for all technical building systems and reinforce energy performance certificates ***(EPC)*** role. In addition, existing regular safety inspections and programmed maintenance work will remain an opportunity to provide direct advice on energy efficiency improvements.

Amendment 23

Proposal for a directive
Recital 12 a (new)

Text proposed by the Commission	*Amendment*
	(12 a) Member States should ensure that energy performance upgrades of existing buildings also contribute to achieving a healthy indoor environment, including by the removal of asbestos and other harmful substances and by avoiding problems such as mould, as well as safeguarding the fundamental safety structures of the buildings, in particular in relation to fire safety and seismic safety.

Amendment 24

Proposal for a directive
Recital 12 b (new)

Text proposed by the Commission	*Amendment*
	(12b) It is important to ensure that measures to improve the energy performance of buildings do not focus only on the building envelope, but include all elements and technical systems in a building.

Amendment 25

Proposal for a directive
Recital 13

Text proposed by the Commission	*Amendment*
(13) To ensure their best use in building renovation, financial measures related to energy efficiency should be linked to the depth of the renovation***, which*** should be assessed by comparing energy performance certificates (EPCs) issued before and after the renovation.	(13) To ensure their best use in building renovation, ***public*** financial measures related to energy efficiency should be linked to the depth of the renovation ***and promote holistic building renovations as the best way of ensuring high energy performance and improved indoor comfort. Such renovations*** should be assessed by comparing energy performance certificates (EPCs) issued before and after the renovation ***where proportionate to the extent of the renovation, or by similar adequate and proportionate documentation methods***.

Amendment 26

Proposal for a directive
Recital 13 a (new)

Text proposed by the Commission	*Amendment*
	(13a) Financial mechanisms and incentives should have a central position in the national long-term renovation strategies and be actively promoted by Member States, including by facilitating energy efficient mortgage standards for certified energy efficient building

	renovations, promoting investments for public authorities in an energy efficient building stock, such as by clarifying accounting standards for public investments, and by providing accessible and transparent advisory tools for consumers on their financing options for energy efficient renovations in buildings.

Amendment 27

Proposal for a directive
Recital 13 b (new)

Text proposed by the Commission	*Amendment*
	(13b) Mechanisms to finance energy-efficient new buildings, as well as energy efficiency measures in the building stock, should come from private, public-private and public sources. For private investments, the risk for investments in the modernisation of the building stock should be reduced. Public-private partnerships should especially be taken into consideration for energy efficiency measures in public buildings to decrease the financial burden on smaller and financially weaker cities, regions and Member States. Further, Member States should encourage energy efficiency measures, especially in social housing and housing for the weakest market participants, by public financial support for which Union funds could be used.

Amendment 28

Proposal for a directive
Recital 13 c (new)

Text proposed by the Commission	*Amendment*
	(13c) Where the energy performance certificate attests to the fact that a building's energy performance has improved, it should be possible to include the certification costs in the incentive provided by the Member State concerned.

Amendment 29

Proposal for a directive
Recital 14

Text proposed by the Commission	*Amendment*
(14) Access to financing is easier when good-quality information is available. Public buildings with a total useful floor area over 250 m² should therefore be required to disclose their actual energy consumption.	(14) Access to financing is easier when good-quality information is available. Public buildings ***that are owned by the State, region or municipality or that are privately owned for public use,*** with a total useful floor area over 250 m² should therefore be required to disclose their actual energy consumption.

Amendment 30

Proposal for a directive
Recital 15

Text proposed by the Commission	*Amendment*
(15) The current independent control systems for EPCs should be strengthened to ensure certificates are of good quality, can be used for compliance checking and for producing statistics on the regional/national building stocks. High-quality data on the building stock is needed and this could be partially generated by the registers and databases that almost all Member States are currently developing and managing for EPCs.	(15) The current independent control systems for EPCs should be strengthened to ensure certificates are of good quality, can be used for compliance checking and for producing ***harmonised*** statistics on the ***local/***regional/national building stocks. High-quality data on the building stock is needed and this could be partially generated by the registers and databases that almost all Member States are currently developing and managing for EPCs.

Amendment 31

Proposal for a directive
Recital 16

Text proposed by the Commission	*Amendment*
(16) To meet the objectives of energy efficiency policy for buildings, the transparency of EPCs should be improved by ensuring that that all necessary parameters for calculations, for both certification and minimum energy performance requirements, are set out and applied consistently. Member States should put in place adequate measures to ensure, for example, that the performance of installed, replaced or updated technical building systems is documented in view of building certification and compliance checking.	(16) To meet the objectives of energy efficiency policy for buildings, the transparency of EPCs should be improved by ensuring that that all necessary parameters for calculations, for both certification and minimum energy performance requirements, are set out and applied consistently. Member States should put in place adequate measures to ensure, for example, that the performance of installed, replaced or updated technical building systems is documented in view of building certification and compliance checking. ***With a view to ensuring a well-functioning EPC system, the Commission should, when reviewing the application of this Directive, assess the need for further harmonisation of EPCs.***

Amendment 32

Proposal for a directive
Recital 16 a (new)

Text proposed by the Commission	*Amendment*
	(16a) Recognition, promotion and application of the now finalised set of CEN EPBD standards across the Member States would have a positive impact on the revision of this Directive.

Amendment 33

Proposal for a directive
Recital 17

Text proposed by the Commission	*Amendment*
(17) Commission Recommendation	(17) Commission Recommendation

(EU) 2016/1318 of 29 July 2016 on nearly zero-energy buildings presented how the implementation of the Directive could simultaneously ensure the transformation of the building stock and the shift to a more sustainable energy supply, which also supports the heating and cooling strategy. To make sure appropriate implementation takes place, the general framework for the calculation of the energy performance of buildings should be updated with the support of the work elaborated by the European Committee for Standardisation (CEN), under Mandate M/480 that was given by the European Commission.

(EU) 2016/1318 of 29 July 2016 on nearly zero-energy buildings presented how the implementation of the Directive could simultaneously ensure the transformation of the building stock and the shift to a more sustainable energy supply, which also supports the heating and cooling strategy. To make sure appropriate implementation takes place, the general framework for the calculation of the energy performance of buildings should be updated with the support of the work elaborated by the European Committee for Standardisation (CEN), under Mandate M/480 that was given by the European Commission. ***Calculations of energy performance of buildings should be applied pursuing the optimal energy performance, in accordance with the principle of "energy efficiency first" and while expressed in a numeric indicator of primary energy use in kWh/(m².y), Member States should supplement this by providing an additional numeric indicator for the entire building's overall energy needs.***

Amendment 34

Proposal for a directive
Recital 19

Text proposed by the Commission	*Amendment*
(19) The objectives of this Directive, namely to reduce the energy needed to meet the energy demand associated with the typical use of buildings, cannot be ***adequately*** achieved by the Member States ***acting alone. The objectives of the Directive can be more effectively ensured by acting*** at Union level ***because this guarantees consistency shared objectives, understanding and political drive. Therefore,*** the Union ***adopts*** measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on the European Union. In	(19) ***Since*** the objectives of this Directive, namely to reduce the energy needed to meet the energy demand associated with the typical use of buildings, cannot be ***sufficiently*** achieved by the Member States ***but can rather, by reason of the need to ensure consistency of the shared objective, understanding and political drive, 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 the European Union. In accordance with the principle of

accordance with the principle of proportionality, as ***also*** set out in that Article, this Directive does not go beyond what is necessary to achieve those objectives.	proportionality, as set out in that Article, this Directive does not go beyond what is necessary ***in order*** to achieve those objectives. ***This Directive fully respects the Member States' national specifics and differences and their competences in accordance with Article 194(2) TFEU. Further, the objective of this Directive is to allow the sharing of best practices in order to facilitate the transition to a highly energy efficient building stock in the Union***,

Amendment 35

Proposal for a directive
Article 1 – paragraph 1 – point -1 (new)
Directive 2010/31/EU
Article 1 – paragraph 3 – subparagraph 1 a (new)

Text proposed by the Commission	*Amendment*
	(-1) in Article 1(3), the following subparagraph is added:
	"Member States may apply the minimum requirements for the overall energy performance of buildings to a whole district instead of to a single building, to allow an integrated approach to the district's energy and mobility system within the scope of a holistic refurbishment scheme, provided that each building achieves the minimum requirement for the overall energy performance."

Amendment 36

Proposal for a directive
Article 1 – paragraph 1 – point 1
Directive 2010/31/EU
Article 2 – paragraph 1 – point 3

Text proposed by the Commission	*Amendment*
3. ‘technical building system’ means technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site electricity generation, on-site infrastructure for electro-mobility, or a combination of such systems, including those using energy from renewable sources, of a building or building unit;	3. ‘technical building system’ means technical equipment for space heating, space cooling, ventilation, ***management of indoor air quality,*** domestic hot water, built-in ***indoor and outdoor*** lighting ***systems***, ***solar shading, elevators and escalators,*** building automation and control, ***building data transmission and storage,*** on-site electricity generation ***and storage***, on-site infrastructure for electro-mobility, or a combination of such systems, including those using energy from renewable sources, of a building or building unit;

Amendment 37

Proposal for a directive
Article 1 – paragraph 1 – point 1 a (new)
Directive 2010/31/EC
Article 2 – paragraph 1 – point 3 a (new)

Text proposed by the Commission	*Amendment*
	(1a) in Article 2, the following point is inserted:
	“(3a) ‘trigger point’ means an opportune moment, for example from a cost-effectiveness, cost-efficiency or disruption perspective, in the life cycle of a building for carrying out energy efficiency renovations;”

Amendment 38

Proposal for a directive
Article 1 – paragraph 1 – point 1 b (new)
Directive 2010/31/EU
Article 2 – paragraph 1 – point 3 b (new)

Text proposed by the Commission	*Amendment*
	(1b) in Article 2, the following point is inserted:
	"(3b) 'building renovation passport' means a long-term roadmap, which is based on quality criteria and follows an energy audit, and which outlines relevant measures and renovations that would improve the energy performance of a specific building;"

Amendment 39

Proposal for a directive
Article 1 – paragraph 1 – point 1 c (new)
Directive 2010/31/EU
Article 2 – paragraph 1 – point 3 c (new)

Text proposed by the Commission	*Amendment*
	(1c) in Article 2, the following point is inserted:
	"(3c) 'building automation and control system' means a system comprising all products, software and engineering services for automatic controls including interlocks, monitoring, optimisation, for operation, human intervention and management to achieve energy-efficient, economical and safe operation of technical building systems;"

Amendment 40

Proposal for a directive
Article 1 – paragraph 1 – point 1 d (new)
Directive 2010/31/EU
Article 2 – paragraph 1 – point 3 d (new)

Text proposed by the Commission	*Amendment*
	(1d) in Article 2, the following point is inserted:

	"3d. 'passive element' means a building envelope element or other elements which participate to passive techniques that aim to reduce the energy needs for heating or cooling and the energy use for lighting and ventilation and hence improve thermal and visual comfort;"

Amendment 41

Proposal for a directive
Article 1 – paragraph 1 – point 1 e (new)
Directive 2010/31/EU
Article 2 – paragraph 1 – point 17

Present text	*Amendment*
	(1e) In Article 2, point 17, is replaced by the following:
17. 'effective rated output' means the maximum calorific output, expressed in kW, specified and guaranteed by the manufacturer as being deliverable during continuous operation while complying with the useful efficiency indicated by the manufacturer;	"17. 'effective rated output' means the maximum calorific output, expressed in kW, specified and guaranteed by the manufacturer***, where***: ***(a) 'full load' means maximal capacity demand of technical building systems for space heating, space cooling, ventilation and domestic hot water; and*** ***(b) 'part load' means part of full-load capacity representing average operating conditions;"***

Amendment 42

Proposal for a directive
Article 1 – paragraph 1 – point 1 f (new)
Directive 2010/31/EU
Article 2 – paragraph 1 – point 19 a (new)

Text proposed by the Commission	*Amendment*
	(1f) in Article 2, the following point is

	added:
	'(19a) 'decarbonised building stock' means a building stock performing to nearly zero-energy building level and which is energy efficient to the maximum of its potential.'

Amendment 43
Proposal for a directiveArticle 1 – paragraph 1 – point 2 – point a
Directive 2010/31/EU
Article 2a – paragraph 1

Text proposed by the Commission	*Amendment*
(a) ***the first paragraph consists of Article 4 of the Directive 2012/27/EU on energy efficiency[16] , other than its last subparagraph;***	(a) ***the following paragraph 1 is inserted:***
	'1. Member States shall establish a long-term strategy for the transformation of the national stock of residential and commercial buildings, both public and private, into a highly energy efficient and decarbonised building stock by 2050. The strategy shall include actions for mobilising investment to facilitate renovation needed to achieve the 2050 goals. That strategy shall encompass:
	(a) an overview of the national building stock including relevant building typologies, based, as appropriate, on statistical sampling;
	(b) identification of cost-effective approaches and actions to stimulate technology neutral renovations relevant to the building type and climatic zone, considering relevant trigger points in the life-cycle of the building;
	(c) policies and actions to stimulate cost-effective deep renovations of buildings, including staged deep renovations and decarbonisation of the heating and cooling demand, for example by introducing a scheme for building renovation passports;

(d) policies and actions to support targeted low-cost energy efficiency measures and renovations;

(e) policies and actions to target the worst performing segments of the national building stock, households subject to energy poverty and households subject to split-incentive dilemmas as well as multi-family dwellings facing challenges to conduct renovations, while taking into consideration affordability;

(f) policies and actions to target all public buildings, including social housing;

(g) policies and actions aiming to accelerate technological transition towards smart and well-connected buildings and communities as well as the deployment of very high-capacity networks;

(h) an overview of national initiatives to promote skills and education in the construction and energy efficiency sectors as well as education in both passive elements and smart technologies;

(i) a forward-looking perspective to guide investment decisions of individuals, the construction industry, public institutions including municipalities, housing cooperatives and financial institutions;

(j) an evidence-based estimate of expected energy savings and wider benefits, such as those related to health, safety and air quality.

The development and implementation of Member States' long-term renovation strategies shall be supported by structured, permanent stakeholder platforms, including representatives from local and regional communities, social dialogue representatives including employees, employers, SMEs and the construction sector, as well as minority representatives.

[16] OJ L 315, 14.11.2012, p. 13

Amendment 44

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 –subparagraph 1

Text proposed by the Commission	*Amendment*
In their long-term renovation ***strategy*** referred to in paragraph 1, Member States shall set out a roadmap with clear milestones and ***measures*** to deliver on the long-term 2050 goal to ***decarbonise their*** national building stock, with specific milestones for 2030.	In their long-term renovation ***strategies*** referred to in paragraph 1, Member States shall set out a roadmap with clear milestones and ***actions*** to deliver on the long-term 2050 goal to ***ensure a highly energy efficient and decarbonised*** national building stock, with specific milestones for 2030 ***and 2040 as well as measurable progress indicators***.

Amendment 45

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 – subparagraph 1 a (new)

Text proposed by the Commission	*Amendment*
	In their long-term renovation strategies, Member States shall specify how their milestones contribute to achieving the Union's energy efficiency target(s) in 2030 of [X %], in accordance with Directive 2012/27/EU, as amended by Directive .../2018/EU [COD 2016/0376], and the Union's target to reduce greenhouse gas emissions by 80 to 95 % by 2050.

Amendment 46

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 – subparagraph 2

Text proposed by the Commission	*Amendment*
In addition, the long term renovation ***strategy*** shall contribute to the alleviation of energy poverty.	In addition, the long term renovation ***strategies*** shall ***outline relevant actions that*** contribute to the alleviation of energy poverty ***while supporting equal access to financing tools for energy efficiency renovations for vulnerable households***.

Amendment 47

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3

Text proposed by the Commission	*Amendment*
3. To guide investment decisions as referred to in ***point (d)*** in paragraph 1, Member States shall introduce mechanisms for:	3. To ***enable and*** guide investment decisions as referred to in paragraph 1, Member States shall introduce ***or sustain*** mechanisms for:
(a) the aggregation of projects, to make it easier for investors to fund the renovations referred to in ***points (b) and (c)*** in paragraph 1;	(a) the aggregation of projects, ***including by investment platforms,*** to make it easier for investors to fund the renovations referred to in paragraph 1;
(b) ***de-risking*** energy efficiency operations for investors and the private sector; ***and***	(b) ***the reduction of the perceived risk of*** energy efficiency operations for investors and the private sector***, such as by subjecting the factor for collateral with certified energy efficiency renovations to lower risk weighting in capital requirements***;
(c) the use of public funding to leverage additional private-sector investment or address specific market failures.’	(c) the use of public funding to leverage additional private-sector investment***, including within the framework of the Smart Finance for Smart Buildings Initiative,*** or address specific market failures;

(c a) in line with current Eurostat guidance and clarifications within the framework of ESA 2010, the guidance of investments into an energy efficient public building stock and clarification on the interpretation of accounting rules, to support a holistic approach to public authorities investments;

(c b) the support for project development assistance as well as the facilitation of aggregation of small and medium sized enterprises in groups and consortia to enable packaged solutions for potential clients; and

(c c) the establishment of accessible and transparent advisory tools, such as one-stop-shops for consumers and energy advisory services informing on energy efficiency renovations, and available financial instruments for energy efficiency renovations in buildings.

Amendment 48

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	3a. The Commission shall make recommendations for Member States based on the collection and dissemination of best practices on successful public and private financing schemes for energy efficiency renovations as well as information on schemes for the aggregation of small-scale energy efficiency renovation projects. The Commission shall furthermore provide Member States with recommendations on financial incentives to renovate from a consumer perspective taking into account cost-efficiency differences between

Member States;

Amendment 49

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 b(new)

Text proposed by the Commission	*Amendment*
	3b. Each Member State shall carry out a public consultation including all relevant stakeholders, for a duration of at least three months on the draft long-term renovation strategy prior to the submission of its long-term renovation strategy to the Commission. Each Member State shall publish a summary of the results of its public consultation as an annex to its long-term renovation strategy.

Amendment 50

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 c (new)

Text proposed by the Commission	*Amendment*
	3c. Each Member State shall include details of the implementation of its long-term renovation strategy, including on the planned policies and actions, in accordance with the reporting obligations [Article 19 (a)] of Regulation ... of the European Parliament and of the Council of ... [on the Governance of the Energy Union (2016/0375(COD) (the Governance Regulation)), as a part of its integrated national energy and climate progress

report.

Amendment 51

Proposal for a directive
Article 1 – paragraph 1 – point 3 – point a
Directive 2010/31/EU
Article 6 – paragraph 1 – subparagraph 2

Text proposed by the Commission	*Amendment*
(a) in paragraph 1, the second subparagraph is ***deleted***;	(a) in paragraph 1, the second subparagraph is ***replaced by the following:***
	"For new buildings, Member States shall ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems, if available, is taken into account."

Amendment 52

Proposal for a directive
Article 1 – paragraph 1 – point 4
Directive 2010/31/EU
Article 7 – paragraph 5

Text proposed by the Commission	*Amendment*
(4) in Article 7, the fifth subparagraph is ***deleted;***	(4) in Article 7, the fifth paragraph is ***replaced by the following:***
	"Member States shall ensure, in relation to buildings undergoing major renovation, the taking into account of high-efficiency alternative systems, in so far as this is technically, functionally and economically feasible, as well as that due attention is paid to fire safety and the encouragement of a healthy indoor climate conditions."

Amendment 53

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point a
Directive 2010/31/EU
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission	*Amendment*
(a) in paragraph 1, the third subparagraph is ***deleted;***	(a) in paragraph 1, the third subparagraph is ***replaced by the following:***
	"Member States shall require new buildings to be equipped with self-regulating devices that regulate room temperature levels in each individual room. In existing buildings, the installation of self-regulating devices to individually regulate the room temperature shall be required when heat generators are replaced."

Amendment 54

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 2

Text proposed by the Commission	*Amendment*
2. Member States shall ***ensure*** that in all new non-residential buildings and in all existing non-residential buildings undergoing major renovation ***with more than ten*** parking ***spaces, at least*** one of every ten is equipped with a recharging point within the meaning of Directive 2014/94/EU ***on the deployment of alternative fuels infrastructure[17], which is capable of starting and stopping charging in reaction to price signals***. This requirement shall apply to all non-residential buildings, with more than ten parking spaces, ***as of*** 1 January 2025.	2. Member States shall ***require*** that in all new non-residential buildings and in all existing non-residential buildings ***with more than ten parking spaces*** undergoing major renovation ***encompassing the electrical infrastructure of the building or the*** parking ***lot, at least one parking space is equipped with a recharging point and that*** one of every ten parking spaces is equipped with ***adequate pre-cabling or pre-tubing, in order to enable installation of*** a recharging point within the meaning of Directive 2014/94/EU ***of the European Parliament and the Council***.
	2a. Member States shall require installation of a minimum number of recharging points to all public and commercial non-residential buildings, with more than ten parking spaces, ***by*** 1 January

	2025.
	2b. Member States shall apply the provisions of paragraph 2 to mixed-use buildings with more than ten parking spaces provided they are new or undergoing major renovation encompassing the electrical infrastructure of the building or the parking lot.
Member States may decide not to set or apply the requirements referred to in ***the previous subparagraph*** to buildings owned and occupied by small and medium-sized enterprises as defined in Title I of Annex to Commission Recommendation 2003/361/EC of 6 May 2003.	***2c.*** Member States may decide not to set or apply the requirements referred to in ***paragraph 2*** to buildings owned and occupied by small and medium-sized enterprises as defined in Title I of Annex to Commission Recommendation 2003/361/EC of 6 May 2003.
_____	_____
[17] OJ L 307, 28.10.2014, p. 1	

Amendment 55

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 3

Text proposed by the Commission	*Amendment*
3. Member States shall ensure that ***newly built*** residential buildings and those undergoing major renovations, with more than ten parking spaces, include the pre-cabling to enable the installation of recharging points for electric vehicles for every parking space.	3. Member States shall ensure that ***new*** residential buildings and those undergoing major renovations ***encompassing the electrical infrastructure of the building or the adjacent or built-in parking lot****,* with more than ten parking spaces, include the ***adequate*** pre-cabling ***or pre-tubing*** to enable the installation of recharging points for electric vehicles for every parking space.

Amendment 56

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 4

Text proposed by the Commission	*Amendment*
4. Member States may decide not to set or apply the requirements referred to in paragraphs 2 and 3 to public buildings ***which*** are already covered by Directive 2014/94/EU.***;***	4. Member States may decide not to set or apply the requirements referred to in paragraphs 2 and 3 to public buildings ***provided that they*** are already covered by ***requirements comparable with measures transposing*** Directive 2014/94/EU.

Amendment 57

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 4 a (new)

Text proposed by the Commission	*Amendment*
	4 a. Member States shall ensure that public parking lots operated by private entities are subject to therequirements referred to in paragraphs 2 and 3.

Amendment 58

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 4 b (new)

Text proposed by the Commission	*Amendment*
	4 b. Member States shall tackle regulatory barriers and shall ensure that there are simplified permitting and approval procedures for owners and tenants in order to enable the deployment of recharging points in existing residential and non-residential buildings.

Amendment 59

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b

Directive 2010/31/EU
Article 8 – paragraph 4 c (new)

Text proposed by the Commission	*Amendment*
	4c. Further to the requirements for electro-mobility infrastructure, Member States shall take into consideration the need for alternative fuels infrastructure in buildings and the deployment of dedicated infrastructures, such as by electro-mobility corridors, as well as the need for coherent policies for soft and green mobility, multi-modality and urban planning.

Amendment 60

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point c
Directive 2010/31/EU
Article 8 – paragraph 5

Text proposed by the Commission	*Amendment*
5. Member States shall ensure that, when a technical building system is installed, replaced or upgraded, the overall energy performance of the complete altered system is assessed, documented it and passed on to the building owner, so that it remains available for the verification of compliance with the minimum requirements set pursuant to paragraph 1 and the issue of energy performance certificates. Member States shall ensure that this information is included in the national energy performance certificate database referred to in Article 18(3).	5. Member States shall ensure that, when a technical building system is installed, replaced or upgraded, the overall energy performance of the complete altered system is assessed, ***at full load and at part load, and, where relevant, the impact on indoor air quality is also assessed. The results shall be*** documented it and passed on to the building owner, so that it remains available for the verification of compliance with the minimum requirements set pursuant to paragraph 1 and the issue of energy performance certificates. Member States shall ensure that this information is included in the national energy performance certificate database referred to in Article 18(3).

Amendment 61

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point c
Directive 2010/31/EU
Article 8 – paragraph 6 – subparagraph 1

Text proposed by the Commission	*Amendment*
The Commission is empowered to adopt delegated acts in accordance with Article 23 ***supplementing*** this Directive ***with*** a definition of ‘smartness indicator’ and with the conditions under which the ‘smartness indicator’ ***would*** be provided as additional information to prospective new tenants ***or*** buyers.	The Commission is empowered to adopt delegated acts in accordance with Article 23 ***in order to supplement*** this Directive ***by establishing*** a definition of ***a*** 'smartness indicator'***, after consulting relevant stakeholders, and on the basis of the outlined design and methodology set out in Annex Ia. The definition shall include information on how the indicator could be introduced following a test-phase, how the indicator would be connected to the energy performance certificates referred to in Article 11 and how it could*** be provided as additional ***and meaningful*** information to prospective new ***investors,*** tenants, buyers and ***market participants***.

Amendment 62

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point c
Directive 2010/31/EU
Article 8 – paragraph 6 – subparagraph 2

Text proposed by the Commission	*Amendment*
The smartness indicator shall cover flexibility features, enhanced functionalities and capabilities resulting from more interconnected and built-in intelligent devices being integrated into the conventional technical building systems. The features shall enhance the ability of occupants and the building itself to react to comfort or operational requirements, take part in demand response and contribute to the optimum, smooth and safe operation of the various energy systems and district	The smartness indicator shall cover ***enhanced energy savings, benchmarking and*** flexibility features, enhanced functionalities and capabilities resulting from more interconnected and built-in intelligent devices being integrated into the conventional technical building systems. The features shall enhance the ability of occupants and the building itself to react to comfort or operational requirements***, in particular at part load, including by adapting the energy consumption, to*** take

infrastructures to which the building is connected.	part in demand response and ***to*** contribute to the optimum, ***efficient,*** smooth and safe operation of the various energy systems ***including renewable energy generated on-site,*** and district infrastructures to which the building is connected.

Amendment 63

Proposal for a directive
Article 1 – paragraph 1 – point 6 – point a
Directive 2010/31/EU
Article 10 – paragraph 6

Text proposed by the Commission	*Amendment*
6. Member States shall link their financial measures for energy efficiency improvements in the renovation of buildings to the energy savings achieved due to such renovation. These savings shall be determined by comparing energy performance certificates issued before and after renovation.	6. Member States shall link their financial measures for energy efficiency improvements in the renovation of buildings to the energy savings achieved due to such renovation. These savings shall, ***where proportionate to the extent of the renovation***, be determined by ***an energy audit or by*** comparing energy performance certificates issued before and after renovation***, or by using standard values for calculation of energy savings in buildings or similar relevant, transparent methodology for documentation***.

Amendment 64

Proposal for a directive
Article 1 – paragraph 1 – point 6 – point b
Directive 2010/31/EU
Article 10 – paragraph 6a

Text proposed by the Commission	*Amendment*
6a. When Member States put in place a database for registering EPCs it shall allow tracking the actual energy consumption of the buildings covered, regardless of their size and category. The database shall contain the ***actual*** energy consumption data of ***buildings frequently visited by the***	6a. When Member States put in place a database ***or use an existing database*** for registering EPCs it shall allow tracking the energy consumption of the buildings covered, regardless of their size and category. The database shall contain the energy consumption data of ***buildings***

public with useful floor area of over 250 m² which shall be regularly updated.	***owned, managed or occupied by public authorities*** with useful floor area of over 250 m² which shall be regularly updated.

Amendment 65

Proposal for a directive
Article 1 – paragraph 1 – point 6 – point b
Directive 2010/31/EU
Article 10 – paragraph 6b

Text proposed by the Commission	*Amendment*
6 b. Aggregated anonymised data compliant with EU data protection requirements shall be made available on request, at least for the public authorities for statistical and research purposes.’;	6 b. Aggregated anonymised data compliant with EU data protection requirements shall be made available on request, at least for the public authorities for statistical and research purposes ***and the full dataset shall be available for the building owner***.’;

Amendment 66

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point a
Directive 2010/31/EU
Article 14 – paragraph 1

Text proposed by the Commission	*Amendment*
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) for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a ***centralised*** technical building system of a cumulated effective rated output of over ***100*** 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	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) for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a technical building system ***for space and domestic water heating purposes*** of a cumulated effective rated output of over ***70*** kW. That inspection shall include an assessment of the ***heat generator*** efficiency, ***at full load and at part load,*** and the ***heat generator*** sizing compared with the heating requirements of the

as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.;	building. The assessment of the ***heat generator*** 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;

Amendment 67

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 2 – introductory part

Text proposed by the Commission	*Amendment*
‘2. ***As an alternative to paragraph 1*** Member States ***may set requirements to ensure*** that non-residential buildings with total primary energy use of over 250 MWh per year are equipped with building automation and control systems. These systems shall be capable of:	2. Member States ***shall require*** that non-residential buildings with total primary energy use of over 250 MWh per year are equipped with building automation and control systems ***by 2023***. These systems shall be capable of:

Amendment 68

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 2 – point a

Text proposed by the Commission	*Amendment*
(a) continuously monitoring, analysing and adjusting energy usage;	(a) continuously monitoring, ***logging,*** analysing and adjusting energy usage ***to enable optimal energy performance at full load and at part load***;

Amendment 69

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 – introductory part

Text proposed by the Commission	*Amendment*
3. ***As an alternative to paragraph 1*** Member States may ***set requirements to ensure*** that residential buildings with ***centralised*** technical building systems of a cumulated effective rated output of over ***100*** kW are equipped:	3. Member States may ***require*** that residential buildings with technical building systems of a cumulated effective rated output ***for space and domestic water heating purposes*** of over ***70*** kW are equipped:

Amendment 70

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 – point a

Text proposed by the Commission	*Amendment*
(a) with continuous electronic monitoring that measures systems' efficiency and inform building owners or managers when it has fallen significantly and when system servicing is necessary, and	(a) with continuous electronic monitoring ***functionality*** that measures systems' efficiency and inform building owners or managers when it has fallen significantly and when system servicing is necessary, and

Amendment 71

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 – point b

Text proposed by the Commission	*Amendment*
(b) with effective control functionalities to ensure optimum generation, distribution and use of energy.’;	(b) with effective control functionalities to ensure optimum generation, distribution, ***storage*** and use of energy ***at full load and at part load including hydronic balancing***.’;

Amendment 72

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	3a. Buildings that comply with paragraph 2 or 3 shall be exempt from the requirements laid down in paragraph 1.

Amendment 73

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 b (new)

Text proposed by the Commission	*Amendment*
	3b. Technical building systems explicitly covered by an agreed energy performance criterion or a contractual arrangement specifying an agreed level of energy efficiency improvement, such as energy performance contracting as defined in point (27) of Article 2 of Directive 2012/27/EU or that are operated by a utility or network operator and therefore subject to performance monitoring measures on the system side, shall be exempt from the requirements laid down in paragraph 1.

Amendment 74

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point a
Directive 2010/31/EU
Article 15 – paragraph 1

Text proposed by the Commission	*Amendment*
1. Member States shall lay down the	1. Member States shall lay down the

necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a ***centralised*** technical building system of a cumulated effective rated output of over ***100 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.	necessary measures to establish a regular inspection of the accessible parts of air-conditioning ***and ventilation*** systems for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a technical building system ***for air-conditioning and ventilation*** of a cumulated effective rated output of over ***12kW***. The inspection shall include an assessment of the air-conditioning ***and ventilation*** efficiency***, at full load and at part load,*** 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 ***or ventilation*** system or as regards the cooling requirements of the building in the meantime. ***Member States may set different inspection frequencies depending on the type and effective rated output of air-conditioning systems, whilst taking into account the costs of the inspection of the systems and the estimated energy cost savings that may result from the inspection.***

Amendment 75

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 2 – introductory part

Text proposed by the Commission	*Amendment*
2. ***As an alternative to paragraph 1*** Member States ***may set requirements to ensure*** that non-residential buildings with total primary energy use of over 250 MWh per year are equipped with building automation and control systems. These systems shall be capable of:	2. Member States ***shall require*** that non-residential buildings with total primary energy use of over 250 MWh per year are equipped with building automation and control systems ***by 2023***. These systems shall be capable of:

Amendment 76

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 2 – point a

Text proposed by the Commission	*Amendment*
(a) continuously monitoring, analysing and adjusting energy usage;	(a) continuously monitoring, analysing, ***logging*** and adjusting energy usage ***to enable optimal energy performance at full load and at part load***;

Amendment 77

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 3

Text proposed by the Commission	*Amendment*
3. ***As an alternative to paragraph 1*** Member States may ***set requirements to ensure*** that residential buildings with ***centralised*** technical building systems of a cumulated effective rated output of over ***100 kW***	3. Member States may ***require*** that residential buildings with technical building systems of a cumulated effective rated output ***for air-conditioning or ventilation*** of over ***12 kW are equipped:***
(a) with continuous electronic monitoring that measures systems' efficiency and inform building owners or managers when it has fallen significantly and when system servicing is necessary, and	(a) with continuous electronic monitoring ***functionality*** that measures systems' efficiency and inform building owners or managers when it has fallen significantly and when system servicing is necessary, and
(b) with effective control functionalities to ensure optimum generation, distribution and use of energy.	(b) with effective control functionalities to ensure optimum generation, distribution***, storage*** and use of energy ***at full and at part load including hydronic balancing.***

Amendment 78

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b

Directive 2010/31/EU
Article 15 – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	3a. Buildings that comply with paragraph 2 or 3 shall be exempt from the requirements laid down in paragraph 1.

Amendment 79

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 3 b (new)

Text proposed by the Commission	*Amendment*
	3b. Technical building systems explicitly covered by an agreed energy performance criterion or a contractual arrangement specifying an agreed level of energy efficiency improvement, such as energy performance contracting as defined in point (27) of Article 2 of Directive 2012/27/EU, or that are operated by a utility or network operator and are therefore subject to performance monitoring measures on the system side, shall be exempt from the requirements laid down in paragraph 1.

Amendment 80

Proposal for a directive
Article 1 – paragraph 1 – point 9

Text proposed by the Commission	*Amendment*
(9) in Article 19, ‘2017’ is replaced by ‘***2028***’;	(9) in Article 19, ‘2017’ is replaced by ‘***2024***’;

Amendment 81

Proposal for a directive
Article 1 – paragraph 1 – point 9 a (new)
Directive 2010/31/EU
Article 19 – paragraph 1 a (new)

Text proposed by the Commission	*Amendment*
	(9 a) in Article 19, the following paragraph is added:
	'The Commission shall, in particular, assess the need for further harmonisation of energy performance certificates in accordance with Article 11 .'

Amendment 82

Proposal for a directive
Article 1 – paragraph 1 – point 9 b (new)
Directive 2010/31/EU
Article 19 a (new)

Text proposed by the Commission	*Amendment*
	9b. The following article is inserted:
	"Article 19a
	The Commission shall, before 2020, conclude a feasibility study, clarifying the possibilities and timeline to introduce a building renovation passport, potentially as part of the recommendations section of the energy performance certificates, in order to provide a long-term, step-by-step renovation roadmap for a specific building."

Amendment 83

Proposal for a directive
Article 1 – paragraph 1 – point 10
Directive 2010/31/EU
Article 20 – paragraph 2 –subparagraph 1

Text proposed by the Commission	*Amendment*
Member States shall in particular provide information to the owners ***or*** tenants of buildings ***on energy performance certificates, their purpose and objectives,*** on cost-effective ***ways*** to improve the energy performance of the building ***and, where appropriate***, on financial instruments available to improve the energy performance of the building.	Member States shall in particular provide information ***through independent, accessible and transparent advisory tools such as one-stop-shops*** to the owners***, managers and*** tenants of buildings on cost-effective ***measures*** to improve the energy performance of the building, ***including through renovation advice, on energy performance certificates, their purpose and objectives, on replacing fossil fuel boilers with more sustainable alternatives and*** on financial instruments available to improve the energy performance of the building.

Amendment 84

Proposal for a directive
Annex I – paragraph 1 – point 1 – point a
Directive 2010/31/EU
Annex I – point 1

Text proposed by the Commission	*Amendment*
‘1. The energy performance of a building shall reflect its typical energy use for heating, cooling, domestic hot water, ventilation ***and*** lighting.	‘1. The energy performance of a building shall ***transparently*** reflect its typical energy use for heating, cooling, domestic hot water, ventilation, lighting ***and other technical building systems***.
The energy performance of a building shall be expressed by a numeric indicator of primary energy use in kWh/(m².y), harmonised for the purpose of both energy performance certification and compliance with minimum energy performance requirements. ***The energy performance and*** the methodology applied for its determination shall be transparent and open to innovation.	The energy performance of a building shall be expressed by a numeric indicator of primary energy use in kWh/(m².y), harmonised for the purpose of both energy performance certification and compliance with minimum energy performance requirements. The methodology applied for its determination shall be transparent and open to innovation.
Member States shall describe their national calculation methodology ***following*** the national annex framework of related European standards developed under mandate M/480 given by the European	Member States shall describe their national calculation methodology***, taking into account*** the ***terminology and definitions contained in the*** national annex framework of related European standards developed

Commission to the European Committee for Standardisation (CEN).;	under mandate M/480 given by the European Commission to the European Committee for Standardisation (CEN).;

Amendment 85

Proposal for a directive
Annex I – paragraph 1 – point b
Directive 2010/31/EU
Annex I – point 2

Text proposed by the Commission	*Amendment*
‘2. The energy needs for space heating, space cooling, domestic hot water and adequate ventilation shall be calculated in order to ensure minimum health and comfort levels defined by Member States.	‘2. The energy needs for space heating, space cooling, domestic hot water***,*** ***lighting***, ventilation ***and other technical building systems*** shall be calculated in order to ***maximise health, indoor air quality*** and comfort levels defined by Member States ***at national or regional level***. ***In particular, the temperature on any inner surface of the building should not drop below dew point temperature.***
The calculation of primary energy shall be based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or on more specific information made available for individual district system.	The calculation of primary energy shall be based on primary energy factors per energy carrier, which may be based on national or regional annual***, and possibly also seasonal or monthly,*** weighted averages or on more specific information made available for individual district system.
Primary energy factors shall discount the share of renewable energy in energy carriers so that calculations equally ***treat:*** (a) the energy from renewable ***source*** that is generated on-site (behind the individual meter, i.e. not accounted as supplied), and (b) the energy from renewable energy sources supplied through the energy carrier.’;	***The calculations by Member States*** shall ***first consider the energy needs and subsequently*** equally ***take into account***: (a) the energy from renewable ***sources*** that is generated ***and used*** on-site (behind the individual meter, i.e. not accounted as supplied), and (b) the energy from renewable energy sources supplied through the energy carrier***.***
	The application of primary energy factors shall ensure that the optimal energy performance of the building is pursued, thereby supporting the national implementation of the requirements of Article 9.’

Amendment 86

Proposal for a directive
Annex I – paragraph 1 – point 1 a (new)
Directive 2010/31/EU
Annex I a (new)

Text proposed by the Commission	*Amendment*
	1 a. The following annex is inserted:
	'ANNEX Ia
	Common general framework methodology for the definition of a 'smartness indicator' for buildings as referred to in Article 8(6)
	1. The Commission shall lay down a common general framework methodology to determine the smartness indicator value, rating the ability of a building or building unit to adapt its operation to the needs of the occupant and the grid and to improve its energy efficiency and overall performance.
	The methodology shall take into account a number of features including smart meters, building automation and control systems, smart thermostats, built-in home appliances, recharging points for electric vehicles, energy storage and detailed functionalities and the interoperability of these features. Those impacts shall be assessed for potential benefits for the energy efficiency and performance levels, as well as the enabled flexibility, indoor climate conditions and comfort of the relevant building or building unit.
	2. The smartness indicator shall be determined and calculated in accordance with three key functionalities relating to the building and its technical building systems:
	(a) the ability to maintain, efficiently, high building performance and operation through the reduction of energy demand and a greater use of energy from

renewable sources (electricity and heat), including the ability of the building to manage its own demand or on-site generation by re-managing its own resources;

(b) the ability to adapt its operation mode in response to the needs of the occupant ensuring high standards of indoor health and climate conditions, paying due attention to the availability of user-friendly displays and remote controllability and reporting of indoor air quality and energy use; and

(c) the flexibility of a building's overall electricity demand, including its ability to enable participation in active and passive as well as implicit and explicit demand-response, which shall be measured in terms of how much of the building's load can be shifted at any one time in terms of kW peak, and the capacity in terms of kWh of how much of that flexibility can then be delivered to the grid, including offtake and injection.

This would enable and support the active participation of consumers in the electricity supply market in accordance with Directive 2009/72/EC of the European Parliament and of the Council*.

The framework methodology shall take into account European standards, in particular those developed under mandate M/480.

3. The framework methodology shall ensure full interoperability between smart meters, building automation and control systems, built-in home appliances, smart thermostats within the building and indoor air quality sensors and ventilations, and promote the use of benchmarking and European standards including the Smart Appliances Reference ontology. The smartness indicator shall consider and set a value on openness to third-party systems, for infrastructure such as the electricity grid and district

heating network, electric vehicle infrastructure and demand-response aggregators, with a view to ensuring compatibility in communications, systems control and relevant data or signals transmission.

4. The framework methodology shall include the data handling process within a building or beyond a building's boundaries, which could include data originating in or received by the building itself or the user or occupant. This process shall be based on protocols that allow authenticated and encrypted message exchanges between the occupant and the relevant products or devices within the building. In particular when processing personal data, such as data coming from frequent and remote metering or sub-metering or processed by smart-grid operators, the principles of occupant ownership, data protection, privacy and security shall be ensured. This common methodology framework shall cover real time data and energy-related data coming out of cloud based solutions and shall ensure the security of data, smart meter readings and data communications, and the privacy of final customers, in compliance with relevant Union data protection and privacy law as well as best available techniques for cyber security.

5. The framework methodology shall take into account the positive influence of existing communication networks, in particular the existence of high-speed-ready in-building physical infrastructure, such as the voluntary 'broadband ready' label, and the existence of an access point for multi-dwelling buildings, in accordance with Article 8 of Directive 2014/61/EU of the European Parliament and of the Council**.

6. The framework methodology shall set out the most appropriate format or visual representation of the smartness indicator parameter and shall be simple,

transparent, and easily understandable for consumers, owners, investors, and demand response market participants. It shall complement the energy performance certificate insofar as there is an established link to the energy performance of the building.

****** Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity (OJ L 211, 14.8.2009, p. 55).***

******* Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 concerning measures to reduce the cost of deploying high-speed electronic communication networks (OJ L 155, 23.5.2014, p. 1).'***

EXPLANATORY STATEMENT

The Union's building stock consumes a substantial part of Europe's final energy demand, in particular by fossil fuels. A better performing building stock holds a significant potential for improved energy security and reduced imports of energy to Europe, lower energy bills for European energy consumers, healthier living conditions as well as increased growth and jobs, in particular in SMEs.

To fulfil our international commitments under the COP21 agreement and to achieve the Union's own targets for decarbonisation and energy efficiency in a cost-effective manner, the non-ETS sectors - such as buildings and transport - must deliver on their potential. An ambitious and future-proof Directive for the Energy Performance of Buildings is therefore needed to secure a highly energy efficient and decarbonised European building stock.

Long-term planning and actions by Member States reinforced

A key element to secure the needed renovations of the building stock is the national long-term renovation strategies, comprised in the national climate and energy plans of the Governance Regulation.

The rapporteur recommends strengthening the requirements to the content of the national long-term renovation strategies, in order to deliver the needed renovations in particular of the existing building stock. Member States must, with due consideration to subsidiarity, ensure comprehensive and ambitious renovation strategies, outlining specific actions to target the worst performing building stock, tackle split-incentives, consider relevant trigger points in the life cycle of a building, tackle legal accounting limits for public investments, and ensure access to information about financial instruments available for energy renovations for consumers.

Proportionate electro-mobility requirements

The Commission's proposal aims at using the revision of the Directive to contribute further to decarbonisation of transport by using the infrastructure around buildings to facilitate the rollout of electric mobility infrastructure.

The rapporteur suggests focusing the requirements of the Directive to either pre-cabling or pre-tubing, to ensure a proportionate cost-level, and to focus the requirement only on related renovations, i.e. electrical infrastructure or parking lot, to ensure that incentives to renovate are not undermined. Additionally, the rapporteur strengthens the requirement towards public buildings and public parking lots operated by private entities, to ensure that public authorities contribute adequately.

Better regulation and good incentives for renovations

The Commission's original proposal includes several suggested updates of the existing Directive to ensure less administrative burdens when renovating and give better conditions for carrying out energy renovations.

The rapporteur builds on that proposal in order to ensure better regulation and proper incentives to carry out energy renovations. The suggestions include strengthening the elements of the proposal concerning the use of building automation, to clarify its value in its

own right, and to clarify its use as alternative to inspections for simplification purposes. The rapporteur also outlines the specific conditions, scope and purpose for the delegation of competences to the Commission to develop a smartness indicator. The Rapporteur furthermore suggests clarifying the documentation requirements for energy savings achieved by renovations to ensure proportionality by introducing alternative and adequately secure documentation options, thereby not undermining incentives to conduct renovations.

Correct picture of buildings' energy performance

The Commission proposes that the calculation of the Primary Energy Factor (PEF) shall discount and give equal treatment to renewables produced on-site and off-site. The PEF is used for the calculation of the energy performance of a building.

The rapporteur argues to maintain the reference to equal treatment of on-site and off-site renewables, to ensure cost-effective rollout of renewables, but deletes the reference to obligatory discounting, as this entails a risk of undermining the correct picture of buildings' actual energy consumption and performance. Thereby, incentives to make energy efficiency improvements could be undermined. All other PEF-issues remain regulated by Energy Efficiency Directive and Renewable Energy Directive.

ANNEX: LIST OF ENTITIES OR PERSONS FROM WHOM THE RAPPORTEUR HAS RECEIVED INPUT

Organization
European Building Automation and Controls Association, EU.bac
Velux
Danish Energy Association
Rockwool
DG Energy
Veolia
Schöck
DONG Energy
Estonian Energy Ministry
Buildings Performance Institute Europe, BPIE
AFCO Worldwide
European Heat Pump Association, EHPA
KREAB
EUFORES
Confederation of Danish Industries, DI
Active House Alliance
European Alliance to Save Energy, EU-ASE
EUROPEAN RENEWABLE ENERGIES FEDERATION asbl
Schneider Electric
EpiCenter
EON
Danish District Heating Association, DANVA
Electric Underfloor Heating Alliance
ENEL SPA
Confederation of Danish Enterprises
Novozymes
Euroheat & Power
UNION FRANCAISE DE L'ELECTRICITE
Bosch
AmCham EU
The Danish Construction Association
Danish Ministry for Climate and Energy
Eco Council Denmark
Smart Energy Demand Coalition EU
WWF
Danish Association of Construction Clients, DACC
Local Government Denmark
European Historic Houses Association
International Union of Property Owners
Director General of the European Property Federation
Council of European Municipalities and Regions
Orgalime

CEZ group
Eni
European Environmental Bureau (EEB)
Climate Action Network Europe
European Energy Forum
HydrogenEurope
GD4S coalition
Eurelectric
SolarPowerEurope
WindEurope
FireSafeEurope
VOEWG
Swedish PermRep
Green Building Council Denmark
Confederation of Norwegian Enterprise
REHVA
ENGIE
Statoil
E.on
Fleishman Hillard
GRDF
Saint Gobain
PlasticsEurope
European Construction Industry Federation
Grace Public Affairs
Smart Energy Demand Coalition
European Forum for Manufacturing
British Chamber of Commerce in Belgium
Council of Gas Detection and Environmental Monitoring (CoGDEM)
European Facility Management Coalition
EuroCommerce
EDSO for Smart Grids
EnerginetDK
EnergyCoalition
Danfoss
Grundfoss
EnergiWatch
Cembreau
EDF
Dalkia
Enel
BDEW - German Association of Energy and Water Industries
EPEE
European Builders Confederation (EBC)
Eurima
EuroAce - European Alliance of Companies for Energy Efficiency in Buildings
FIEC - European Construction Industry Federation

Tesla
CoGen
European Federation of Building and Woodworkers
European Aluminium
Fédération du Commerce et de la Distribution
Knauf Insulation
The European Chemical Industry Council, CEFIC
CableEurope
BASF
ABB
Norsk Hydro ASA
CEMEX
Association of North German Chambers of Commerce and Industry
European Engineering Industries Association
International Energy Agency
European Copper Institute
BDR Thermea
EC Power A/S
Platform for Eletro-Mobility
European Solar Thermal Industry Federation (ESTIF)
German Federation of Companies in the Gas and Water Industry (figawa)
Glass for Europe
Shell
GreenEnergyOptions, GEO
SustainSolutions
European Mortgage Federation
European Construction Industry Federation
Siemens
Vattenfall
EUnited
HSSE
Dow
Renault Group
Transport & Environment
Bellona
Austrian Federal Economic Chamber (WKÖ)
Vestas
Housing Europe
Danish Social Housing Federation
Dutch Social Housing Federation
French Social Housing Federation
German Social Housing Federation
European Union of House builders and Developers
BEUC
World Green Building Council (WorldGBC)
Snam S.p.A.
BDI/BDA The German Business Representation

European Federation of Intelligent Energy Efficiency Services
German Retail Federation
Architects' Council of Europe - Conseil des Architectes d'Europe
Swedish Petroleum and Biofuel Institute
AFEP
Cercle de l'Industrie
ES-SO European Solar Shading Organization
E3G - Third Generation Environmentalism
European Economic and Social Committee
European Heating Industry (EHI)
Federal Chamber of German Architects
European Federation of National Organisations Working with the Homeless
NALCO Water
Avisa Partners
LightingEurope AISBL
BMW Group
Ecofys
Danske Arkitektvirksomheder
United Technologies Corporation UTC
EU association for engineering building services and installers
European Geothermal Energy Council
AEBIOM
EuroFuel
Rud-Pedersen
Client Earth

19.9.2017

OPINION OF THE COMMITTEE ON THE ENVIRONMENT, PUBLIC HEALTH AND FOOD SAFETY

for the Committee on Industry, Research and Energy

on the proposal for a directive of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings
(COM(2016)0765 – C8-0499/2016 – 2016/0381(COD))

Rapporteur: Anneli Jäätteenmäki

SHORT JUSTIFICATION

The Commission proposal tries to increase the energy efficiency of the European building stock and to contribute positively to the EU climate goals. The chosen method is to enhance implementation of the existing directive and to propose some provisions that go beyond the current situation. Putting energy efficiency first is rightly restated as the guiding principle.

Given the slow annual renovation rate of European buildings (around 0,4-1,2% depending on the Member State) and the complex interplay between EU legislation, national building codes, building practices, economic trends and the ownership structure of the building stock, there still remains enormous untapped energy saving potential. In light of the current trend, the coming years will not radically change the situation.

Without further measures, energy efficiency renovations will be carried out when they are economically reasonable and have the proper incentives in place in order to incentivise reaching the energy efficiency goals.

It is important that the Member States know their building stock and thus help the different actors to prioritise the renovations based on cost-efficiency. This is encouraged in the amendment to Article 2 on the long-term renovation strategies.

Currently, there is an urgent need for widely available financing products that would include and support the positive aspects of energy efficiency renovations, such as the higher asset value and healthier living conditions for the occupants. The Commission's efforts in enabling financing, such as the “Smart Finance for Smart Buildings” initiative are to be encouraged.

The rapporteur would like to stress two major issues: healthy building and the Commission

proposal on electro-mobility.

First, one cannot overstate the importance of healthy buildings. A healthy building is designed to fulfil the needs of its occupants and can be modified to accommodate future needs. It is constructed from durable, repairable and recyclable non-toxic materials. It uses energy efficiently and might also produce it, has sufficient natural light and is ventilated and heated properly to maintain good indoor air quality and temperature.

Nowadays, most people spend most of their time indoors. According to estimates, tens of millions of Europeans suffer from bad indoor air quality, often because of excessive dampness, which encourages the growth of mould and can also cause structural damage to the building.

The range of affected buildings varies from private dwellings to public buildings. The way buildings are built and maintained has huge effects on public health and the well-being of the whole population.

Energy inefficient houses and energy poverty are intimately linked. If the housing estates postpone the necessary renovations due to lack of financing, they risk further degrading of the living conditions and also decrease the value of the housing stock.

For the rapporteur, the second major issue is the proposal on electro-mobility, introduced in the amended Article 8.

The proposition includes all new non-residential buildings and existing non-residential buildings undergoing major renovation with more than ten parking spaces. Newly built residential buildings and those undergoing major renovations are also included. For the first category, at least 10 % of the parking spaces should be equipped with a recharging point. For the second category, every parking space should be equipped with pre-cabling.

In the rapporteur's view, the charging infrastructure obligations proposed by the Commission undermine the efficient allocation of both private and public money.

Currently, charging technology is being developed at a fast pace. Many Member States have already taken steps to build the charging infrastructure. The cost of a charging point is decreasing. Private companies and public utilities have viable business cases for building the network and pricing electric vehicle charging.

For new buildings, both non-residential and residential, the necessary infrastructure can be integrated to the design process from the beginning. It is therefore wise to make new buildings future proof by ducting. This would leave sufficient flexibility for the sizing of the cabling and ensure that the necessary charging infrastructure can easily be built when needed.

For existing non-residential buildings, the obligation should be relaxed to apply only in cases where the renovation concerns electric infrastructure of the building. This would help to keep the return for investment for the actual energy efficiency improvements higher.

AMENDMENTS

The Committee on the Environment, Public Health and Food Safety calls on the Committee

on Industry, Research and Energy, as the committee responsible, to take into account the following amendments:

Amendment 1

Proposal for a directive
Recital 1

Text proposed by the Commission	*Amendment*
(1) The Union is committed to a sustainable, competitive, secure and decarbonised energy system. The Energy Union and the Energy and Climate Policy Framework for 2030 establish ambitious Union commitments to reduce greenhouse gas emissions further (by at least 40 % by 2030, as compared with 1990), to increase the proportion of renewable energy consumed (by at least 27 %) and to make energy savings of at least 27 %, reviewing this level having in mind an Union level of 30 %[10], ***and*** to improve Europe's energy security, competitiveness and sustainability.	(1) The Union is committed to a sustainable, competitive, secure and decarbonised energy system ***and to a high level of human health protection***. The Energy Union and the Energy and Climate Policy Framework for 2030 establish ambitious Union commitments to reduce greenhouse gas emissions further (by at least 40 % by 2030, as compared with 1990), to increase the proportion of renewable energy consumed (by at least 27%) and to make energy savings of at least 27%, reviewing this level having in mind an Union level of ***at least*** 30 %[10], to improve Europe's energy security, competitiveness and sustainability ***and to promote access to affordable energy in order to reduce energy poverty***.

Amendment 2

Proposal for a directive
Recital 1 a (new)

Text proposed by the Commission	*Amendment*
	(1a) The Commission has co-financed a number of projects which foster experience and good practices in regional collaboration, practices which can be shared across the Union with a view to improving the implementation of this Directive. Examples of those projects include MARIE, and its extension SHERPA, along with ELIH-MED and PROFORBIOMED.

Amendment 3

Proposal for a directive
Recital 2 a (new)

Text proposed by the Commission	*Amendment*
	(2a) Improvements to the energy efficiency in buildings reduce the demand for heating fuels, in particular solid heating fuels, and therefore contribute to improving air quality through reduced emission pollutants and achieving, in a cost effective manner, the objectives of Union's air quality policy, as established in particular by Directive (EU) 2016/2284 of the European Parliament and of the Council[1a]. Energy efficiency should therefore be considered to be an element of air quality policy, especially in Member States where achieving Union's limits on emissions of air pollutants is problematic and energy efficiency could help attain those goals.
	[1a] Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, p. 1-31).

Justification

The residential sector is responsible for important shares of pollutant emissions, such as BaP, PM2.5 and PM10 in Europe stemming from smoke caused by burning solid fuels used for residential heating. These pollutants increase mortality, morbidity and hospitalization, especially as measured emission values often go well beyond the limits established by the EU air quality legislation.

Amendment 4

Proposal for a directive
Recital 2 b (new)

Text proposed by the Commission	*Amendment*
	(2b) Around 50 million households in the Union are affected by energy poverty. Energy poverty should be considered to be the inability of a household to support an adequate level of energy supply so as to guarantee basic levels of comfort and health, due to a combination of low income, high-energy prices and low quality, poor performing housing stock. Current building renovation rates are insufficient and buildings owned or occupied by low-income citizens at risk of energy poverty are the hardest to reach.

Amendment 5

Proposal for a directive
Recital 5 a (new)

Text proposed by the Commission	*Amendment*
	(5a) The Union's building stock will need to become 'nearly zero-energy buildings' (nZEB) by 2050, in line with the objectives of COP21 (the Paris Agreement). The current building renovation rates are insufficient and those buildings owned or occupied by low-income citizens at risk of energy poverty are the hardest to reach.

Amendment 6

Proposal for a directive
Recital 6

Text proposed by the Commission	*Amendment*
(6) The Union is committed to developing a secure, competitive and decarbonised energy system by 2050[12]. To meet this goal, Member States and investors need milestones to ensure that	(6) The Union is committed to developing a secure, competitive and decarbonised energy system by 2050[12]. ***In the light of the Paris Agreement and*** to meet this goal, Member States and

buildings are decarbonised by 2050. In order to ensure this decarbonised building stock by 2050, Member States should identify ***the*** intermediary steps to achieving ***the*** mid-term (2030) and long-term (2050) objectives.

investors need ***ambitious targets and clear*** milestones ***and measures*** to ensure that buildings are decarbonised ***and that the overall energy efficiency of buildings is increased so that they reach the nZEB standard*** by 2050. In order to ensure this decarbonised building stock by 2050, Member States should identify intermediary steps ***and the trajectory*** to achieving mid-term (2030 ***and 2040***) and long-term (2050) objectives ***and stimulate the renovation of the existing building stock as the current building renovation rates are insufficient.***

Amendment 7

Proposal for a directive
Recital 6 a (new)

Text proposed by the Commission	*Amendment*
	(6a) To meet the targets for decarbonising the building stock by 2050, and to reduce greenhouse gas emissions and promote the transition to a low-carbon economy, it will be necessary to take a holistic approach to defining energy-efficient buildings. The construction of new buildings and the renovation of existing buildings should aim to create buildings that fulfil the needs of occupants and that can be modified to accommodate future needs, that are constructed from durable, repairable and recyclable non-toxic materials, that use energy efficiently and that could also produce energy, that have sufficient natural light, that fulfil safety requirements, including fire safety, and that are ventilated and heated properly to maintain a healthy indoor air quality.

Amendment 8

Proposal for a directive
Recital 6 b (new)

Text proposed by the Commission	*Amendment*
	(6b) The Paris Agreement must be reflected in the Union's efforts to decarbonise its building stock, taking into account that almost 50 % of the Union's final energy demand is used for heating and cooling, of which 80 % is used in buildings. The Union´s energy and climate goals therefore need to be met by switching supply to nearly 100 % renewables by 2050 at the latest, which can be achieved only by reducing energy consumption and making full use of the 'energy efficiency first' principle, as energy efficiency measures are the most cost effective way of achieving reductions in greenhouse gas emissions.

Amendment 9

Proposal for a directive
Recital 6 c (new)

Text proposed by the Commission	*Amendment*
	(6c) As up to 90 % of the 2050 built environment already exists, more ambitious efforts are needed to accelerate the rate of renovating and decarbonising the existing building stock. As 30 years is a relatively short time period to renew the existing building stock, the incentives and standards set today will ultimately determine whether the Union will reach its long-term climate and energy goals.

Amendment 10

Proposal for a directive
Recital 7

Text proposed by the Commission	*Amendment*
(7) The provisions on long-term renovation strategies provided for in Directive 2012/27/EU of the European Parliament and of the Council[13] should be moved to Directive 2010/31/EU, where they fit more coherently	(7) The provisions on long-term renovation strategies provided for in Directive 2012/27/EU of the European Parliament and of the Council[13] should be moved to Directive 2010/31/EU, where they fit more coherently***, and where they accomplish Member States' plans to arrive at a nearly zero energy buildings stock by 2050. While keeping that long-term objective, they should be accompanied by binding milestones for 2030 and 2040. The long-term renovation strategies and the renovation work that they stimulate will contribute to boosting growth through the creation of jobs, and to providing clean and affordable energy to consumers. Financing mechanisms and financial incentives should be given a central position in the Member States' long-term national renovation strategies and be actively promoted by them. Furthermore, a strategy for promoting specialist support and advice for consumers and for training specialists should be included.***
[13] 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 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).	[13] 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 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).

Amendment 11

Proposal for a directive
Recital 7 a (new)

Text proposed by the Commission	*Amendment*
	(7a) The construction industry alone directly accounts for 18 million jobs in the Union and generates 9 % of its GDP.

Energy efficiency measures in the building industry with ambitious goals for the deep, gradual renovation of existing building stock have the potential to accelerate the modernisation of that sector and its associated workforce and to create millions of jobs in the Union, in particular in micro-, small and medium-sized enterprises. Underlying cost-optimality calculations for elaborating Member States' long-term renovation strategies and decisions on their minimum performance criteria should also duly take account the economic value of co-benefits of energy efficiency measures, such as job creation, asset value, reduced import dependence, health or indoor and outdoor air quality, via harmonised reference values as a part of the guidance for the Union's cost-optimality calculation methodology.

Amendment 12

Proposal for a directive
Recital 7 b (new)

Text proposed by the Commission	*Amendment*
	(7b) As the building stock in the Union is being modernised to a higher level of energy efficiency, it is also becoming more complex. There is an increasing need for cooperation between the different professionals on-site. The right set of professional skills plays an essential part in untapping that potential and improving the building stock. Encouragement for systemic thinking should start from the educational system and continue throughout the careers of builders. In that context, it is necessary for Member States to provide a clear link between their national long-term renovation strategies and suitable initiatives, to promote skills and education, lifelong training and skills for technicians and professionals working

in the construction and energy efficiency sectors as well as to inform communities groups and small businesses on energy awareness, efficiency measures and building renovation.

Amendment 13

Proposal for a directive
Recital 7 c (new)

Text proposed by the Commission	*Amendment*
	(7c) National renovation strategies should set out the expected results and the contribution to achieving the overall energy efficiency target in the short term (2030), medium term (2040) and long term (2050).

Amendment 14

Proposal for a directive
Recital 9

Text proposed by the Commission	*Amendment*
(9) In order to adapt this Directive to the technical progress, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission to supplement it by defining the smartness indicator and enabling its implementation. The smartness indicator should be used to measure buildings' capacity to use ICT and electronic systems to optimise operation and interact with the grid. The smartness indicator will raise awareness amongst building owners and occupants of the value behind building automation and electronic monitoring of technical building systems and will give confidence to the occupant about the actual savings of these new enhanced-functionalities.	(9) In order to adapt this Directive to the technical progress, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission to supplement it by defining the smartness indicator and enabling its implementation. The smartness indicator should be used to measure buildings' capacity to use ICT and electronic systems to optimise operation***, particularly the supply and use of energy (such as water and air),*** and interact with the grid. The smartness indicator will raise awareness amongst building owners and occupants of the value behind building automation and electronic monitoring of technical building systems and will give confidence to the occupant about the actual savings of these

new enhanced-functionalities.

Amendment 15

Proposal for a directive
Recital 10

Text proposed by the Commission	*Amendment*
(10) Innovation and new technology also make it possible for buildings to support the overall decarbonisation of the economy. For example, buildings can leverage the development of the infrastructure necessary for the smart charging of electric vehicles ***also*** provide a basis for Member States, if they choose to, to use car batteries as a source of power. To reflect this aim, the definition of technical building systems should be extended.	(10) Innovation and new technology also make it possible for buildings to support the overall decarbonisation of the economy. For example, buildings can leverage the development of the infrastructure necessary for the smart charging of electric vehicles ***and also*** provide a basis for Member States, if they choose to, to use car batteries as a source of power. ***In view of the energy efficiency target, water may also be a source of energy in buildings. Heat recovery units may, for example, make it possible to produce heat from waste water.*** To reflect this aim ***of overall decarbonisation***, the definition of technical building systems should be extended.

Amendment 16

Proposal for a directive
Recital 10 a (new)

Text proposed by the Commission	*Amendment*
	(10a) Water is an essential element of many technical building systems, such as heating and cooling systems, and in domestic uses. The supply of the pump and pressure systems required to transport water uses a lot of energy. In addition, water leaks account for 24 % of total water consumption in the Union, resulting in energy and water loss. More effective management and a decrease in water use in new and renovated buildings

would therefore contribute to the objective of rational use of resources.

Amendment 17

Proposal for a directive
Recital 10 b (new)

Text proposed by the Commission	*Amendment*
	(10 b) Measures to further improve the energy performance of buildings should take into account the Union's nZEB benchmarks required for new buildings by 2021, and the requirement for a fully nZEB building stock by 2050, and, in this context, should also take into account climatic and local conditions as well as indoor climate; health and safety requirements including fire safety, indoor and outdoor air quality, and cost-effectiveness, including non-energy related benefits.

Justification

The EU benchmark for nZEB defined in the Commission Recommendation (EU) 2016/1318 shall serve as a guidance for MS that are lagging behind in improving energy performance requirements.

Amendment 18

Proposal for a directive
Recital 10 c (new)

Text proposed by the Commission	*Amendment*
	(10c) The promotion of alternative, safe and sustainable modes of transport, such as bicycles, also contributes to the overall decarbonisation of the economy and should be integrated by the Member States as an element of the long-term strategies aimed at increasing the renovation rate of the building stock across the Union.

Amendment 19

Proposal for a directive
Recital 10 d (new)

Text proposed by the Commission	*Amendment*
	(10d) Member States should provide incentives for the use of natural building materials with low carbon content and the deployment of green rooftops in the occasion of major building renovations as they can be effectively used for improving air quality, for addressing the worsening of climatic conditions, particularly in urban areas, and for improving the overall energy performance of buildings.

Amendment 20

Proposal for a directive
Recital 11

Text proposed by the Commission	*Amendment*
(11) The impact assessment identified two existing sets of provisions, whose aim could be achieved in a more efficient manner compared to the current situation. First the obligation, before any construction starts, to carry out a feasibility study on highly-efficiency alternative systems becomes an unnecessary burden. Second, provisions related to inspections of heating systems and air-conditioning systems were found to not sufficiently ensure, in an efficient manner, the initial and maintained performance of these technical systems. ***Even*** cheap technical solutions with very short payback periods, such as hydraulic balancing of the heating system and installation/replacement of thermostatic control valves, are insufficiently considered today. Provisions related to inspections are amended to ensure a better result from inspections.	(11) The impact assessment identified two existing sets of provisions, whose aim could be achieved in a more efficient manner compared to the current situation. First the obligation, before any construction starts, to carry out a feasibility study on highly-efficiency alternative systems becomes an unnecessary burden. Second, provisions related to inspections of heating systems and air-conditioning systems were found to not sufficiently ensure, in an efficient manner, the initial and maintained performance of these technical systems. Cheap technical solutions with very short payback periods, such as hydraulic balancing of the heating system and installation/replacement of thermostatic control valves, are insufficiently considered today ***and should be fully exploited, including as solutions for assisting energy-poor consumers***. Provisions related to inspections are amended to ensure a better result from

	inspections. ***Factors such as the original design and position of the building should be taken in account with a view to achieving greater initial energy efficiency, which would, in turn, lead to savings in other improvements, such as the fittings, outer structure and lighting. To obtain real-time data so that systems can be optimised when necessary, monitoring systems also need to be developed.***

Amendment 21

Proposal for a directive
Recital 12

Text proposed by the Commission	*Amendment*
(12) Notably for large installations, building automation and electronic monitoring of technical building systems have proven to be an effective replacement for inspections. The installation of such equipment should be considered as the most cost-effective alternative to inspections in large non-residential and multifamily buildings of a sufficient size that allow a payback of less than three years. The current possibility to opt for alternative measures is therefore deleted. For small scale installations, the documentation of the system performance by installers and the registration of this information in the databases on energy performance certification will support the verification of compliance with the minimum requirements set for all technical building systems and reinforce energy performance certificates role. In addition, existing regular safety inspections and programmed maintenance work will remain an opportunity to provide direct advice on energy efficiency improvements.	(12) Notably for large installations, building automation and electronic monitoring of technical building systems have proven to be an effective replacement for inspections ***and maintenance***. The installation of such equipment should be considered as the most cost-effective alternative to inspections in large non-residential and multifamily buildings of a sufficient size that allow a payback of less than three years. The current possibility to opt for alternative measures is therefore deleted. For small scale installations, the documentation of the system performance by installers and the registration of this information in the databases on energy performance certification will support the verification of compliance with the minimum requirements set for all technical building systems and reinforce energy performance certificates role. In addition, existing regular safety inspections and programmed maintenance work will remain an opportunity to provide direct advice on energy efficiency improvements.

Amendment 22

Proposal for a directive

Recital 12 a (new)

Text proposed by the Commission	*Amendment*
	(12a) The deployment of technical building systems should relate to equipment (new technologies, smart equipment), but also systems governing their operation and interaction. That relates, in particular, to the transmission of energy in buildings and systems to manage water and air efficiently.

Amendment 23

Proposal for a directive
Recital 12 b (new)

Text proposed by the Commission	*Amendment*
	(12b) In the case of staged deep renovations, technical building systems and building automation and control systems also present an opportunity to realise savings potential with relatively short payback periods, allowing to generate additional savings over longer periods to be re-invested in the next stage of renovation.

Amendment 24

Proposal for a directive
Recital 13

Text proposed by the Commission	*Amendment*
(13) To ensure their best use in building renovation, financial measures related to energy efficiency should be linked to the depth of the renovation, which should be assessed by comparing energy performance certificates (EPCs) issued before and after	(13) To ensure their best use in building renovation, ***both public and private*** financial measures related to energy efficiency should be linked to the depth of the renovation ***and should promote a holistic approach to building renovations in order to ensure that all parts and***

the renovation.	***technical building systems, including building maintenance, result in a high level of energy efficiency and improved indoor air quality with positive impact on health, well-being, comfort and productivity. Such renovations*** should be assessed by comparing energy performance certificates (EPCs) issued before and after the renovation***, or another transparent and proportionate method***.

Amendment 25

Proposal for a directive
Recital 13 a (new)

Text proposed by the Commission	*Amendment*
	(13a) Long-term renovation strategies with clear milestones and measures stimulate energy efficiency investments from the private sector. Long-term investments should be further stimulated by facilitating access to refinancing of portfolios the assets of which have energy efficiency renovations characteristics.

Amendment 26

Proposal for a directive
Recital 13 b (new)

Text proposed by the Commission	*Amendment*
	(13b) In order to encourage renovations, long-term private financing and de-risking tools should be promoted by implementing energy efficient mortgage standards for certified energy efficient building renovations. A lower risk weighting in capital requirements should be recognized for financial institutions providing energy efficient mortgages. The requirements should reflect the potential risk mitigating effects of energy efficiency

and be reviewed in light of de-risking data gain, and where appropriate, a lower capital charge for energy efficiency mortgage collateral should be considered.

Amendment 27

Proposal for a directive
Recital 13 c (new)

Text proposed by the Commission	*Amendment*
	(13c) In that regard, small-scale efficiency actions in individual apartments remain important. Such actions are often useful in alleviating fuel poverty.

Amendment 28

Proposal for a directive
Recital 13 d (new)

Text proposed by the Commission	*Amendment*
	(13d) Where a new energy performance certificate demonstrates an improvement in the building's efficiency, its cost may be included in the incentive provided by a Member State.

Amendment 29

Proposal for a directive
Recital 14

Text proposed by the Commission	*Amendment*
(14) Access to financing is easier ***when good-quality*** information is available. Public buildings ***with a total useful floor area over 250 m²*** should ***therefore be required to*** disclose their actual energy consumption***.***	(14) Access to financing is easier ***with an ambitious and stable long-term framework in place and when good-quality*** information is available. ***This information also includes EPCs, information from maintenance and inspections and energy performance databases.*** Public buildings***, including***

those owned, managed and occupied by public authorities, whether owned by the Member State, region, or municipality, or privately owned but publicly used buildings, should ***meet their role and lead by example by becoming nZEB buildings in accordance with Directive 2012/27/EU and*** disclose their actual energy consumption.

Amendment 30

Proposal for a directive
Recital 15

Text proposed by the Commission	*Amendment*
(15) The current independent control systems for EPCs should be strengthened to ensure certificates are of good quality, can be used for compliance checking and for producing statistics on the ***regional/national*** building stocks. High-quality data on the building stock is needed and this could be partially generated by the registers and databases that almost all Member States are currently developing and managing for EPCs.	(15) The current independent control systems for EPCs should be strengthened to ensure certificates are of good quality, can be used for compliance checking and for producing ***harmonised*** statistics on the ***local, regional and national*** building stocks. High-quality data on the building stock is needed and this could be partially generated by the registers and databases that almost all Member States are currently developing and managing for EPCs.

Amendment 31

Proposal for a directive
Recital 16

Text proposed by the Commission	*Amendment*
(16) To meet the objectives of energy efficiency ***policy*** for buildings, the transparency of EPCs should be improved by ensuring that that all necessary parameters for calculations, for both certification and minimum energy performance requirements, are set out and applied consistently. Member States should put in place adequate measures to ensure, for example, that the performance of installed, replaced or updated technical	(16) To meet the objectives of energy efficiency for buildings ***as part of the Union's binding energy efficiency target of at least 40 % by 2030***, the transparency of EPCs should be improved by ensuring that that all necessary parameters for calculations, for both certification and minimum energy performance requirements, are set out and applied consistently. Member States should put in place adequate measures to ensure, for

building systems is documented in view of building certification and compliance checking.	example, that the performance of installed, replaced or updated technical building systems is documented in view of building certification and compliance checking.

Amendment 32

Proposal for a directive
Recital 18

Text proposed by the Commission	*Amendment*
(18) The provisions of this Directive should not prevent Member States from setting more ambitious energy performance requirements at building level and for building elements as long as such measures are compatible with Union law. It is consistent with the objectives of this Directive and of Directive 2012/27/EC that these requirements may, in certain circumstances, limit the installation or use of products subject to other applicable Union harmonisation legislation, provided that such requirements should not constitute an unjustifiable market barrier.	(18) The provisions of this Directive should not prevent Member States from setting more ambitious energy performance ***and indoor air quality*** requirements at building level and for building elements as long as such measures are compatible with Union law. It is consistent with the objectives of this Directive and of Directive 2012/27/EC that these requirements may, in certain circumstances, limit the installation or use of products subject to other applicable Union harmonisation legislation, provided that such requirements should not constitute an unjustifiable market barrier.

Amendment 33

Proposal for a directive
Recital 18 a (new)

Text proposed by the Commission	*Amendment*
	(18a) Member States should base their calculation of the energy performance of a transparent or translucent building element of the building envelope on its energy balance, meaning taking energy losses as well as energy gains from passive solar irradiance into account.

Amendment 34

Proposal for a directive
Recital 18 b (new)

Text proposed by the Commission	*Amendment*
	(18b) Cities, regional and local authorities show already the example by implementing energy efficiency measures, building renovation schemes and enabling self-generation. Bodies such as the Covenant of Mayors, smart cities and communities or 100 % renewable energy communities contribute through the actions of their members to increase energy performance and allow the sharing of best practices for energy transition. Projects at a district level showcase, in particular, the need to consider the function of buildings integrated in a local energy system, local mobility plan and their ecosystem in general.

Amendment 35

Proposal for a directive
Recital 18 c (new)

Text proposed by the Commission	*Amendment*
	(18c) It is important to build multi-level governance strategies and macro-regional collaboration in line with the climate diversity of the Union and the challenges that climate change poses to different regions.

Amendment 36

Proposal for a directive
Recital 18 d (new)

Text proposed by the Commission	*Amendment*
	(18d) This Directive should be an

additional instrument in the framework of the Energy Union and the Union's new energy governance to tackle energy poverty. For that reason, it encourages the Union to produce a clear common definition of energy poverty, and calls for the existing studies to be considered with a view to finding a possible definition as soon as possible.

Amendment 37

Proposal for a directive
Article 1 – paragraph 1 – point 1
Directive 2010/31/EU
Article 2 – point 3

Text proposed by the Commission	*Amendment*
3. technical building system means technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site electricity generation, on-site infrastructure for electro-mobility, or a combination of such systems, including those using energy from renewable sources, of a building or building unit;	3. technical building system means technical equipment***,*** for space heating, space cooling, ***indoor air quality***, ventilation, ***water systems,*** domestic hot water, built-in lighting, building automation and control ***including energy management***, on-site electricity generation, on-site infrastructure for electro-mobility, or a combination of such systems, including those using energy from renewable sources, of a building or building unit;

Amendment 38

Proposal for a directive
Article 1 – paragraph 1 – point 1 a (new)
Directive 2010/31/EU
Article 2 – point 3 a (new)

Text proposed by the Commission	*Amendment*
	(1a) in Article 2, the following point is inserted:
	'3a. "decarbonised building stock" means a highly energy efficient building stock which has been renovated to at least

nZEB level and where the remaining energy needs are met by renewable energy sources;'

Amendment 39

Proposal for a directive
Article 1 – paragraph 1 – point 1 b (new)
Directive 2010/31/EU
Article 2 – point 19 a (new)

Text proposed by the Commission	*Amendment*
	(1b) in Article 2, the following point is inserted:
	"19a. "trigger point "means an opportune moment, for example from a cost-efficiency or disruption perspective, in the life cycle of a building for carrying out energy renovations ;"

Amendment 40

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point a
Directive 2010/31/EU
Article 2a – paragraph 1

Text proposed by the Commission	*Amendment*
(a) the ***first*** paragraph ***consists of Article 4*** of the ***Directive 2012/27/EU on energy efficiency[16] , other than its last subparagraph***;	(a) the ***following*** paragraph ***1 is inserted:***
	"1. Member States shall establish a long-term renovation strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, both public and private, with the aim of encouraging and guiding the transformation of the building stock into a highly energy efficient and decarbonised building stock by 2050. That strategy shall encompass:

(a) an overview of the national building stock based, as appropriate, on statistical sampling;

(b) identification of cost-effective approaches to renovations relevant to the building type and climatic zone, taking into account trigger points in the life-cycle of a building;

(c) policies and measures to stimulate cost-effective deep renovations of buildings, including staged deep renovations;

(d) a forward-looking perspective to guide investment decisions of individuals, the construction industry and financial institutions*;*

(e) an evidence-based estimate of expected energy savings and wider benefits;

(f) complementary and/or alternative measures to renovation, such as energy performance contracting, independent and easily accessible energy advisory services, measures aimed at improving consumer behaviour or connection to efficient district heating and cooling system;

(g) policies and actions with quantifiable objectives to target the worst performing segments of the national building stock, households subject to energy poverty and to split-incentive dilemmas for renovations;"

Amendment 41

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point a a (new)
Directive 2010/31/EU
Article 2a – paragraph 1 a (new)

Text proposed by the Commission	*Amendment*
	(aa) the following paragraph is added:

"1a. Member States shall map their existing building stock according to age, typology and energy supply, in order to develop the binding milestones and measures for the renovation needs, taking into account the national energy system.

Member States shall monitor their progress in meeting milestones. Findings should be made available to the public at least every third year, where an update of the strategy also has to be submitted to the Commission.

Member States shall ensure a public consultation on the long-term renovation strategy at least three months before the submission of the strategy to the Commission. The result of the public consultation shall be published as an annex along with the strategy."

Amendment 42

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point a b (new)
Directive 2010/31/EU
Article 2a – paragraph 1 b (new)

Text proposed by the Commission	*Amendment*
	(ab) the following paragraph is added:
	"1b. Long-term renovation strategies shall be accompanied by national action plans. Member States shall adopt national action plans setting out the measures for implementing, evaluating and monitoring the progress towards the achievement of the goals established under the long-term renovation strategies. The public shall participate in the preparation of the national action plans in line with the requirements of Directive 2001/42/EC on the assessment of certain plan and programmes on the environment."

Justification

The measures to attain, monitor and evaluate the achievement of the decarbonisation goals set in the long-term renovation strategies for the national building stocks should be clearly specified in action plans prepared at national level. Public participation shall be ensured in the preparation and adoption of the national action plans.

Amendment 43

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point a c (new)
Directive 2010/31/EU
Article 2a – paragraph 1 c (new)

Text proposed by the Commission	*Amendment*
	(ac) the following paragraph is added:
	"1c. Member States shall specify how their milestones contribute to achieving the Union's energy efficiency target of 30 % by 2030 in accordance with Directive 2012/27/EU and the energy union's renewable energy target in accordance with Directive 2009/28/EU and with the Union's target of reducing greenhouse gas emissions by at least 80 % by 2050.

Amendment 44

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 – subparagraph 1

Text proposed by the Commission	*Amendment*
In their long-term renovation strategy referred to in paragraph 1, Member States shall set out a roadmap with clear milestones and measures to deliver on the long-term 2050 goal to ***decarbonise their national*** building stock, with specific milestones for 2030.	In their long-term renovation strategy referred to in paragraph 1,Member States shall set out a roadmap with clear milestones***, actions*** and measures to deliver on the long-term 2050 goal ***to substantially improve the energy efficiency and to achieve a highly energy-efficient and decarbonized*** building stock, with specific milestones for 2030 ***and 2040***.

	When setting those milestones, Member States shall specify how they contribute to achieving the Union's energy efficiency target in 2030 in accordance with the Union's target to reduce greenhouse gas emissions by 80 % to 95 % by 2050.
	In addition, the long term renovation strategy shall establish specific measures and financing instruments to decrease energy demand and contribute to the alleviation of energy poverty.

Amendment 45

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 – subparagraph 2

Text proposed by the Commission	*Amendment*
In addition, the ***long term*** renovation strategy shall contribute to the alleviation of energy poverty.	In addition, the ***long-term*** renovation strategy shall contribute to the alleviation of energy poverty ***and set out a roadmap with clear milestones and measures to renovate the social housing stock***. ***In order to ensure and maintain a healthy indoor climate, Member States shall map out and address unexpected and unwanted health and comfort side-effects of building renovations.***

Amendment 46

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 2 a (new)

Text proposed by the Commission	*Amendment*
	2a. The long-term strategy shall also encourage the uptake of smart technologies in the building sector and encompass initiatives looking at skills and education related to the deployment of smart and connected technologies in

	buildings, and policies and actions aiming to accelerate the technological transition towards smart and connected buildings.

Amendment 47

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 – point a

Text proposed by the Commission	*Amendment*
(a) the aggregation of projects, to make it easier for investors to fund the renovations referred to in points (b) and (c) in paragraph 1;	(a) ***assisting project developers with the preparation, implementation and monitoring of their energy renovation projects, and mechanisms for*** the aggregation of projects, to make it easier for investors to fund the renovations referred to in points (b) and (c) in paragraph 1;

Amendment 48

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 – point b

Text proposed by the Commission	*Amendment*
(b) de-risking energy efficiency operations for investors and the private sector; and	(b) de-risking energy efficiency operations for investors and the private sector***, such as by supporting the disclosure of loan-level performance data related to energy renovations, the development of a valuation framework linking energy efficiency with increased property values, encouraging the refinancing of portfolios of assets related to energy renovations***; and

Amendment 49

Proposal for a directive

Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 – point b a (new)

Text proposed by the Commission	*Amendment*
	(ba) making available independent and easily accessible energy advisory services as well as accessible and transparent advisory tools, such as single points of contact for consumers which provide information about the structuring and provision of finances for building renovations and support users in taking steps to improve energy efficiency in buildings, including deep or staged-deep renovations, the choice of materials and technologies and monitoring of energy performance results;

Amendment 50

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2a – paragraph 3 – point b b (new)

Text proposed by the Commission	*Amendment*
	(bb) facilitating the aggregation of SMEs to enable them to offer packaged solutions to potential clients; and

Amendment 51

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b
Directive 2010/31/EU
Article 2 a – paragraph 3 – point c a (new)

Text proposed by the Commission	*Amendment*
	(ca) creating multi-level governance that includes all the regions, and, as far as possible, local governments, together with experience on the energy efficiency of buildings developed as part of projects such as MARIE, SHERPA, ELIH-MED

and PROFORBIOMED.

Amendment 52

Proposal for a directive
Article 1 – paragraph 1 – point 2 – point b a (new)
Directive 2010/31/EU
Article 2a – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	(ba) the following paragraph is added:
	'3a. The Commission shall be empowered to adopt delegated acts in accordance with Article 23 to supplement this Article with further criteria for the long-term renovation strategy.'

Amendment 53

Proposal for a directive
Article 1 – paragraph 1 – point 2 a (new)
Directive 2010/31/EU
Article 4 – paragraph 2 – point a

Present text	*Amendment*
	2a. In Article 4(2), point a is replaced by the following:
(a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character or appearance;	"(a) buildings officially protected as part of a designated environment or because of their special architectural or historical merit, ***or non-protected residential buildings constructed from natural materials, to adhere to traditions, with manual labour, in insignificant numbers every year[1a],*** in so far as compliance with certain minimum energy performance requirements would unacceptably alter their character***,*** ***uniqueness*** or appearance;
	[1a] In numbers not exceeding one thousandth of the number of construction projects per year in the Member State."

Amendment 54

Proposal for a directive
Article 1 – paragraph 1 – point 3 – point a
Directive 2010/31/EU
Article 6 – paragraph 1 – subparagraph 2

Text proposed by the Commission	*Amendment*
(a) in paragraph 1, the second subparagraph is ***deleted;***	(a) in paragraph 1, the second subparagraph is ***replaced by the following:***
	"Streamlined with the requirement to achieve nZEB standard, Member States shall ensure - in compliance with Article 15(8) of Directive... [*] and Article 14 of Directive ... [the Energy Efficiency Directive] that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as decentralised energy supply systems based on renewable sources, cogeneration, district or block heating based on renewable sources as well as highly efficient heat pumps as defined in Annex VII to Directive 2009/28/EC, is considered.
	_____
	[*] Directive COM(2016) 767 final/2 on the promotion of the use of energy from renewable sources (recast)'

Justification

In order to reduce administrative burden for Member States while enabling their compliance with Art 15 § 8 of the Renewables Directive (recast) and Art 9, paragraph 3, c Directive 2010/31/EU, provisions on feasibility assessment of highly energy efficiency alternative systems should be streamlined. It must be noted that this requirement reduces the risk of lock-in effects and stranded assets bearing in mind that installed devices tend to last for more than 25 years on average.

Amendment 55

Proposal for a directive
Article 1 – paragraph 1 – point 3 a (new)
Directive 2010/31/EU

Article 7 – paragraph 1 a (new)

Text proposed by the Commission	*Amendment*
	(3a) In Article 7, the following paragraph is inserted after the first paragraph:
	"Member States shall ensure that improvements in energy performance contribute to achieving a healthy and comfortable indoor environment."

Amendment 56

Proposal for a directive
Article 1 – paragraph 1 – point 4
Directive 2010/31/EU
Article 7 – paragraph 5

Text proposed by the Commission	*Amendment*
(4) in Article 7, the fifth subparagraph is ***deleted;***	(4) in Article 7, the fifth subparagraph is ***replaced by the following:***
	"Streamlined with the requirement to achieve nZEB standard, Member States shall ensure - in compliance with Article 15(8) of Directive ...* and Article 14 of Directive ... [the Energy Efficiency Directive] that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as decentralized energy supply systems based on renewable sources, cogeneration, district or block heating based on renewable sources as well as highly efficient heat pumps as defined in Annex VII of Directive 2009/28/EC, is considered.
	_____
	**** Directive COM(2016) 767 final/2 on the promotion of the use of energy from renewable sources (recast)'***

Justification

In order to reduce administrative burden for Member States while enabling their compliance

with Art 15 § 8 of the Renewables Directive (recast) and Art 9, paragraph 3, c Directive 2010/31/EU, provisions on feasibility assessment of highly energy efficiency alternative systems should be streamlined. It must be noted that this requirement reduces the risk of lock-in effects and stranded assets bearing in mind that installed devices tend to last for more than 25 years on average.

Amendment 57

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point a
Directive 2010/31/EU
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission	*Amendment*
(a) in paragraph 1, the third subparagraph is ***deleted;***	(a) in paragraph 1, the third subparagraph is ***replaced by the following:***
	"Member States shall require hydronic balancing of newly installed or replaced heating systems and provide incentives for hydronic balancing of existing heating systems. Members States shall also require hydronic balancing when heat generators are replaced in existing buildings, unless the system is already balanced.
	Member States shall require that new buildings are equipped with self-regulating devices that regulate room temperature levels in each individual room. In existing buildings, the installation of self-regulating devices to individually regulate the room temperature shall be required when heat generators are replaced."

Justification

Hydronic balancing prevents that radiators installed at a remote location of the heating pump are not sufficiently supplied with hot water whereas radiators near the pump are oversupplied. It provides constant temperature levels and optimal energy use. Self-regulating devices that regulate room temperature and hydronic balancing are very cost efficient measures to save energy in buildings. In some Member States thermostatic radiator valves are standard since 1978, in other simple radiator valves are used in large scope. Replacing the remaining simple valves would grant 4% of the EU energy reduction goals for 2020. The replacement of simple radiator valves in one building saves on average 13% to 19% of the energy needed to heat the building. The payback time of those measures is only a couple of

months.

Amendment 58

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b – introductory part
Directive 2010/31/EU
Article 8 – paragraph 2

Text proposed by the Commission	*Amendment*
(b) paragraph 2 ***is replaced by the following***:	(b) ***the following subparagraphs are inserted at the end of*** paragraph 2***,***:
	(The aim of the AM is to conserve Art 8, § 2 of Directive 2010/31/EU)

(In line with the Directive concerning common rules for the internal market in electricity (recast), in particular Articles, 19-22, 18 and Annex III.)

Justification

Accurate smart meters can achieve both: enabling consumer participation and contributing to energy savings in buildings through consumer awareness. The provisions on intelligent metering should therefore not be removed from this Directive. Member States shall continue to encourage the introduction of intelligent metering systems in accordance with the revised Electricity Directive, whenever a building is constructed or undergoes major renovation, as this will also allow a more cost-efficient deployment.

Amendment 59

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 2 – subparagraph 1

Text proposed by the Commission	*Amendment*
Member States shall ensure that in all new non-residential buildings and in all existing non-residential buildings undergoing major renovation with more than ten parking spaces, at least one of every ***ten*** is ***equipped*** with ***a recharging point*** within the meaning of Directive 2014/94/EU on the deployment of alternative fuels infrastructure, which is capable of ***starting and stopping charging in reaction*** to price	Member States shall ensure that in all new non-residential buildings ***with more than ten parking spaces*** and in all existing non-residential buildings undergoing major renovation with more than ten parking spaces ***inside or physically adjacent to the building, where that renovation affects the electrical infrastructure of the building or of the parking spaces,*** at least one of every ***three*** is ***furnished*** with

signals. This requirement shall apply to all non-residential buildings, with more than ten parking spaces, as of 1 January 2025.	***suitable pre-cabling or ducting to enable the construction of a recharging point*** within the meaning of Directive 2014/94/EU on the deployment of alternative fuels infrastructure, ***and at least one recharging point within the meaning of Directive 2014/94/EU is constructed*** which is capable of ***dynamically reacting*** to price signals***, with the power of at least 7kW on every parking space with a recharging point***. This requirement shall apply to all non-residential buildings, with more than ten parking spaces, as of 1 January 2025.
[17] OJ. L 307, 28.10.2014, p. 1.	[17] OJ. L 307, 28.10.2014, p. 1.

Justification

For new non-residential buildings, the requisite electronic infrastructure can be integrated into the planning from the beginning. It is therefore wise to make new buildings future-proof by fitting pre-cabling or ducting. For existing non-residential buildings, the obligation should be relaxed to apply only in cases where the renovation affects the parking area or the electrical infrastructure of the building. A symbolic charging point should be installed in parking areas.

Amendment 60

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point b
Directive 2010/31/EU
Article 8 – paragraph 3

Text proposed by the Commission	*Amendment*
3. Member States shall ensure that ***newly built*** residential buildings and those undergoing major renovations, with more than ten parking spaces, include the pre-cabling to enable the installation of recharging points for electric vehicles for every parking space.	3. Member States shall ensure that ***new*** residential buildings and those undergoing major renovations, ***insofar as the renovation includes the electric infrastructure or the car park,*** with more than ten parking spaces ***inside or physically adjacent to the building***, include the ***appropriate*** pre-cabling ***or pre-ducting*** to enable the installation of recharging points for electric vehicles ***in line with best available technology*** for every parking space.

Amendment 61

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point c
Directive 2010/31/EU
Article 8 – paragraph 5

Text proposed by the Commission	*Amendment*
5. Member States shall ensure that, when a technical building system is installed, replaced or upgraded, the overall energy performance of the complete altered system is assessed, documented it and passed on to the building owner, so that it remains available for the verification of compliance with the minimum requirements set pursuant to paragraph 1 and the issue of energy performance certificates. Member States shall ensure that this information is included in the national energy performance certificate database referred to in Article 18(3).	5. Member States shall ensure that, when a technical building system is installed, replaced or upgraded, the overall energy ***and, where relevant, indoor air quality*** performance of the complete altered system is assessed, documented it and passed on to the building owner, so that it remains available for the verification of compliance with the minimum requirements set pursuant to paragraph 1 and the issue of energy performance certificates. Member States shall ensure that this information is included in the national energy performance certificate database referred to in Article 18(3).

Amendment 62

Proposal for a directive
Article 1 – paragraph 1 – point 5 – point c
Directive 2010/31/EU
Article 8 – paragraph 6 – subparagraph 2

Text proposed by the Commission	*Amendment*
The smartness indicator shall cover flexibility features, enhanced functionalities and capabilities resulting from more interconnected and built-in intelligent devices being integrated into the conventional technical building systems. The features shall enhance the ability of occupants and the building itself to react to comfort or operational requirements, take part in demand response and contribute to the optimum, smooth and safe operation of the various energy systems and district	The smartness indicator shall cover flexibility features, enhanced functionalities and capabilities resulting from more interconnected and built-in intelligent devices being integrated into the conventional technical building systems. The features shall enhance the ability of occupants and the building itself to react to ***indoor air quality and thermal*** comfort or operational requirements, take part in demand response and contribute to the optimum, smooth***, healthy*** and safe

infrastructures to which the building is connected.;	operation of the various energy systems and district infrastructures to which the building is connected.;

Amendment 63

Proposal for a directive
Article 1 – paragraph 1 – point 6 – point a
Directive 2010/31/EU
Article 10 – paragraph 6

Text proposed by the Commission	*Amendment*
6. Member States shall link their financial measures for energy efficiency improvements in the renovation of buildings to the energy savings achieved due to such renovation. These savings shall be determined by comparing energy performance certificates issued before and after renovation.	6. Member States shall link their financial measures for energy efficiency improvements in the renovation of buildings to the energy savings ***and non-energy benefits such as indoor air quality improvements*** achieved due to such renovation. These savings ***and improvements*** shall be determined by comparing energy performance certificates issued before and after renovation***, or the results of another relevant, transparent and proportionate method that shows the improvement in energy performance and non-energy benefits such as indoor air quality, and that delivers meaningful information to support the mobilisation of private and public finance for investments in buildings to improve energy efficiency or indoor air quality. Those certificates shall be provided also in a digital version with the possibility to include the relevant information in order to model and project the impact of building improvements. Where a new energy performance certificate demonstrates an improvement in the building energy efficiency, its cost may be included in the incentive provided by the Member State.***

Amendment 64

Proposal for a directive

Article 1 – paragraph 1 – point 6 – point b
Directive 2010/31/EU
Article 10 – paragraph 6a

Text proposed by the Commission	*Amendment*
6a. When Member States put in place a database for registering EPCs it shall allow tracking the actual energy consumption of the buildings covered, regardless of their size and category. The database shall contain the actual energy consumption data of buildings frequently visited by the public with useful floor area of over 250 m² which shall be regularly updated.	6a. When Member States put in place a database for registering EPCs it shall allow tracking the actual energy consumption of the buildings covered, regardless of their size and category. The database shall contain the actual energy consumption data of ***public buildings with useful floor area of over 250 m² and*** buildings frequently visited by the public with useful floor area of over 250 m² which shall be regularly updated.

Amendment 65

Proposal for a directive
Article 1 – paragraph 1 – point 6 a (new)
Directive 2010/31/EU
Article 11 – paragraph 9 a (new)

Text proposed by the Commission	*Amendment*
	(6a) in Article 11 the following paragraph is added:
	'9a. The Commission shall assess the need for further harmonisation of energy performance certificates in accordance with Article 11, taking into account the feasibility of introducing national sample-based systems to monitor them.'

Amendment 66

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point a
Directive 2010/31/EU
Article 14 – paragraph 1

Text proposed by the Commission	*Amendment*
1. Member States shall lay down the necessary measures to establish a regular	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)*** for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with ***a centralised technical building system*** of a cumulated effective rated output of over 100 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;	inspection of the accessible parts of the heat generator for non-residential buildings with total primary energy use of over 250MWh and for residential buildings ***with a heat generator*** of a cumulated effective rated output of over 100 kW. That inspection shall include an assessment of the ***heat generator*** efficiency and ***the heat generator*** sizing compared with the heating requirements of the building***, of the effectiveness of individually controlling the room temperature in each room and of hydronic balancing of the heating system***. The assessment of the ***heat generator*** sizing ***and the hydronic balancing*** 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;

Amendment 67

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EC
Article 14 – paragraph 2 – point a

Text proposed by the Commission	*Amendment*
(a) continuously monitoring, analysing and adjusting energy usage;	(a) continuously monitoring, analysing and adjusting energy usage ***as well as ventilation and/or other elements linked to good indoor air quality***;

Amendment 68

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 – point b

Text proposed by the Commission	*Amendment*
(b) with effective control functionalities to ensure optimum generation, distribution and use of energy***.;***	(b) with effective control functionalities to ensure optimum generation, distribution***, storage*** and use of

energy***, including individual room temperature and dynamic hydraulic balancing functionalities***.

Amendment 69

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	3a. Notwithstanding paragraph 1 Member States may take measures to ensure that adequate advice is given to users concerning the replacement of heat generators, other modifications to the heating system and alternative solutions to assess the efficiency and appropriate size of the heating generator. The overall impact of that approach shall be equivalent to the impact arising from the measures taken pursuant to paragraph 1.;

Justification

Some Member States already have equivalent measures to inspections such as advice systems in place which have shown to be successful to increase the energy efficiency of heating systems. This flexibility and alternative measure should be kept for Member States.

Amendment 70

Proposal for a directive
Article 1 – paragraph 1 – point 7 – point b
Directive 2010/31/EU
Article 14 – paragraph 3 b (new)

Text proposed by the Commission	*Amendment*
	3b. Technical building systems explicitly covered by a contractual arrangement on an agreed level of energy efficiency improvement or other agreed energy performance criterion, such as energy performance contracting as defined in Article 2(27) of Directive

2012/27/EU shall be exempt from paragraph 1.

Justification

The role of energy performance contracts in increasing the energy efficiency of buildings must be increased, as those contracts offer a holistic approach to renovations, including financing, implementation of construction work and energy management. In entering into an energy performance contract, the building owner enters into a contract with an energy efficiency company regarding the implementation of energy efficiency measures. Inspections and audits are part of the contract.

Amendment 71

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point a
Directive 2010/31/EU
Article 15 – paragraph 1

Text proposed by the Commission	*Amendment*
1. Member States shall lay down the necessary measures to establish a regular inspection of the accessible parts of air-conditioning systems for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a centralised technical building system of a cumulated effective rated output of over 100 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;	1. Member States shall lay down the necessary measures to establish a regular inspection ***and to monitor the need for maintenance*** of the accessible parts of air-conditioning systems for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a centralised technical building system of a cumulated effective rated output of over 100 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;

Amendment 72

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EC

Article 15 – paragraph 2 – point a

Text proposed by the Commission	*Amendment*
(a) continuously monitoring, analysing and adjusting energy usage;	(a) continuously monitoring, analysing and adjusting energy usage ***as well as ventilation and/or other elements linked to good indoor air quality***;

Amendment 73

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 3 – point b

Text proposed by the Commission	*Amendment*
(b) with effective control functionalities to ensure optimum generation, distribution and use of energy.;	(b) with effective control functionalities to ensure optimum generation, distribution***, storage*** and use of energy.;

Amendment 74

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 3 a (new)

Text proposed by the Commission	*Amendment*
	3a. Notwithstanding paragraph 1, Member States may take measures to ensure that adequate advice is given to users concerning the replacement of air-conditioning systems, other modifications to the air-conditioning system and alternative solutions to assess the efficiency and appropriate size of the air-conditioning system. The overall impact of that approach shall be equivalent to that arising from paragraph 1.

Justification

Some Member States should have the flexibility to opt for equivalent measures to inspections

such as advice systems in place. This flexibility and alternative measure should be kept for Member States.

Amendment 75

Proposal for a directive
Article 1 – paragraph 1 – point 8 – point b
Directive 2010/31/EU
Article 15 – paragraph 3 b (new)

Text proposed by the Commission	*Amendment*
	3b. Technical building systems explicitly covered by a contractual arrangement on an agreed level of energy efficiency improvement or other agreed energy performance criterion, such as energy performance contracting as defined in Article 2(27) of Directive 2012/27/EU shall be exempt from paragraph 1.

Justification

The role of energy performance contracts in increasing the energy efficiency of buildings must be increased, as those contracts offer a holistic approach to renovations, including financing, implementation of construction work and energy management. In entering into an energy performance contract, the building owner enters into a contract with an energy efficiency company regarding the implementation of energy efficiency measures. Inspections and audits are part of the contract.

Amendment 76

Proposal for a directive
Article 1 – paragraph 1 – point 9
Directive 2010/31/EU
Article 19

Text proposed by the Commission	*Amendment*
(9) ***in*** Article 19***, '2017'*** is replaced by ***'2028'***;	(9). Article 19 is replaced by ***the following:***
	"Article 19
	Review
	The Commission, assisted by the Committee established by Article 26, shall

evaluate this Directive by 1 January 2024, in the light of the experience gained and progress made during its application, and, if necessary, make legislative proposals.

It shall publish, by the end of 2020, an impact assessment on the possible expansion of the Directive's scope, given its possible revision in 2024, with a view to providing for the inclusion of the embodied energy required to construct a building and its building components."

Amendment 77

Proposal for a directive
Article 1 – paragraph 1 – point 11
Directive 2010/31/EU
Article 23 – paragraph 2

Text proposed by the Commission	*Amendment*
2. The power to adopt delegated acts referred to in Article 5, 8 and 22 shall be conferred on the Commission for ***an indeterminate*** period of ***time from*** [date of ***the*** entry into force**…**].	2. The power to adopt delegated acts referred to in Article 5, 8 and 22 shall be conferred on the Commission for ***a*** period of ***5 years from XXX*** [date of entry into force ***of the Directive***]. ***The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period.***

Amendment 78

Proposal for a directive
Annex I – paragraph 1 – point 1 – point a
Directive 2010/31/EU
Annex I – point 1 – subparagraph 1

Text proposed by the Commission	*Amendment*
The energy performance of a building shall reflect its typical energy use for heating, cooling, domestic hot water, ventilation and lighting.	The energy performance of a building ***is to be determined on the basis of the estimated or actual energy usage for heating, cooling, domestic hot water, ventilation and lighting and*** shall reflect its typical energy use for heating, cooling, domestic hot water, ventilation and

lighting.

Justification

Der Text aus dem aktuellen Anhang I der Richtlinie 2010/31/EU wurde wieder eingeführt. Um die Gesamtenergieeffizienz eines Gebäudes zu bestimmen, ist es nicht ausreichend einzig den Primärenergiebedarf zu evaluieren. Zuerst sollte die Energiemenge berechnet werden, die gebraucht wird, um den typischen Energieverbrauch eines Gebäudes zu decken. Dieser Endenergieverbrauch und der Primärenergiebedarf eines Gebäudes sollten zur Bewertung der Gesamtenergieeffizienz verwendet werden. Die Primärenergie beschreibt vielmehr die Qualität der verwendeten Energie als die Menge der Energie, die zur Deckung des Energiebedarfs eines Gebäudes nötig ist.

Amendment 79

Proposal for a directive
Annex I – paragraph 1 – point 1 – point a
Directive 2010/31/EU
Annex I – point 1 – paragraph 3

Text proposed by the Commission	*Amendment*
Member States shall ***describe their*** national calculation methodology following the national annex framework of related European standards developed under mandate M/480 given by the European Commission to the European Committee for Standardisation (CEN)***;***	***Within two years after the approval by formal vote in CEN,*** Member States shall ***implement and apply the EPB standards in the*** national calculation methodology following the national annex framework of related European standards developed under mandate M/480 given by the European Commission to the European Committee for Standardisation (CEN).

Justification

An EU approach to accelerate innovation and energy savings across Europe is indispensable to avoid fragmentation of the internal market. The EPB standards, which were recently approved by National Standard Bodies, make it possible to calculate the energy performance of buildings across the EU using the same methodologies. These methodologies rely on the most recent data, helping the market uptake of the most efficient heating technologies. A transitional period of two years will enable planners and architects to put these EPB standards to the test and resolve any remaining inconsistencies.

Amendment 80

Proposal for a directive
Annex I – paragraph 1 – point 1 – point b
Directive 2010/31/EU

Annex I – point 2 – subparagraph 1

Text proposed by the Commission	*Amendment*
The energy needs for space heating, space cooling, domestic hot water and adequate ventilation shall be calculated in order to ***ensure minimum*** health and comfort levels defined by Member States.	The energy needs for space heating, space cooling, domestic hot water and adequate ventilation***, expressed as delivered energy and primary energy,*** shall be calculated in order to ***maximise requirements for*** health, ***indoor air quality*** and comfort levels defined by Member States. ***Particular attention shall be paid to avoiding the temperature on any inner surface of the building dropping below the dew-point temperature and to avoiding overheating.***

Justification

Overheating is an equally important problem that affects the health and comfort of building users, as well as the energy performance of buildings.

Amendment 81

Proposal for a directive
Annex I – paragraph 1 – point 1 – point b (new)
Directive 2010/31/EU
Annex 1 – point 2 – subparagraph 3 a (new)

Text proposed by the Commission	*Amendment*
	Member States shall ensure that calculation methodologies and primary energy factors for different on-site renewable energy carriers and conversion technologies duly reflect the characteristics of the specific energy carrier in view of the overall energy system, in particular the potential alternative use of the energy carrier that is converted and consumed on-site and the export potential for off-site use of energy generated on-site.

Justification

Different forms of on-site RES have different characteristics i.e. they have alternative uses, interact differently with the overall energy system etc. Hence the PEFs for the purpose of determining the energy performance requirements should be differentiated according to two

major groupings: 1) Conversion technologies, which use a RES resource generated on-site and which cannot be exported (ambient heat) or conversion technologies, which use a RES resource generated on-site and which can be exported (micro-wind) 2) Conversion technologies, which use a RES resource that is not generated on-site (pellets for pellet boilers).

Amendment 82

Proposal for a directive
Annex I – paragraph 1 – point 1 – point c a (new)
Directive 2010/31/EU
Annex I – point 5 a (new)

Text proposed by the Commission	*Amendment*
	(ca). the following point is added:
	"5a. When calculating the energy performance of a transparent or translucent building element of the building envelope, Member States should consider its energy balance, meaning taking energy losses as well as energy gains from passive solar irradiance into account, combined with all relevant aspects from points 3, 4 and 5."

Justification

Member States are so far not guided to for the calculation of the energy performance of building elements that form part of the building envelope. Common calculation methods could improve the level playing field in the internal market.

PROCEDURE – COMMITTEE ASKED FOR OPINION

Title	Energy performance of buildings
References	COM(2016)0765 – C8-0499/2016 – 2016/0381(COD)
Committee responsible Date announced in plenary	ITRE 12.12.2016
Opinion by Date announced in plenary	ENVI 12.12.2016
Rapporteur Date appointed	Anneli Jäätteenmäki 20.2.2017
Discussed in committee	29.5.2017
Date adopted	7.9.2017
Result of final vote	+: 53 –: 0 0: 6
Members present for the final vote	Marco Affronte, Catherine Bearder, Ivo Belet, Biljana Borzan, Lynn Boylan, Paul Brannen, Soledad Cabezón Ruiz, Nessa Childers, Birgit Collin-Langen, Mireille D'Ornano, Miriam Dalli, Seb Dance, Stefan Eck, José Inácio Faria, Karl-Heinz Florenz, Arne Gericke, Julie Girling, Sylvie Goddyn, Jytte Guteland, Anneli Jäätteenmäki, Jean-François Jalkh, Benedek Jávor, Karin Kadenbach, Urszula Krupa, Peter Liese, Norbert Lins, Valentinas Mazuronis, Susanne Melior, Massimo Paolucci, Gilles Pargneaux, Piernicola Pedicini, Bolesław G. Piecha, Pavel Poc, Frédérique Ries, Annie Schreijer-Pierik, Davor Škrlec, Renate Sommer, Claudiu Ciprian Tănăsescu, Ivica Tolić, Nils Torvalds, Adina-Ioana Vălean, Jadwiga Wiśniewska, Damiano Zoffoli
Substitutes present for the final vote	Nicola Caputo, Jørn Dohrmann, Elena Gentile, Jan Huitema, Merja Kyllönen, Stefano Maullu, Mairead McGuinness, Keith Taylor, Carlos Zorrinho
Substitutes under Rule 200(2) present for the final vote	Bendt Bendtsen, Norbert Erdős, Jill Evans, György Hölvényi, Barbara Lochbihler, Olle Ludvigsson, Elżbieta Katarzyna Łukacijewska

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

53	+
ALDE	Catherine Bearder, Anneli Jäätteenmäki, Valentinas Mazuronis, Frédérique Ries, Nils Torvalds
ECR	Jørn Dohrmann, Arne Gericke, Julie Girling, Urszula Krupa, Bolesław G. Piecha, Jadwiga Wiśniewska
EFDD	Piernicola Pedicini
ENF	Mireille D'Ornano, Sylvie Goddyn, Jean-François Jalkh
GUE/NGL	Lynn Boylan, Stefan Eck, Merja Kyllönen
PPE	Ivo Belet, Bendt Bendtsen, Birgit Collin-Langen, Norbert Erdős, José Inácio Faria, Karl-Heinz Florenz, György Hölvényi, Peter Liese, Norbert Lins, Elżbieta Katarzyna Łukacijewska, Stefano Maullu, Mairead McGuinness, Annie Schreijer-Pierik, Renate Sommer, Ivica Tolić, Adina-Ioana Vălean
S&D	Biljana Borzan, Paul Brannen, Soledad Cabezón Ruiz, Nicola Caputo, Nessa Childers, Miriam Dalli, Seb Dance, Elena Gentile, Jytte Guteland, Karin Kadenbach, Olle Ludvigsson, Susanne Melior, Massimo Paolucci, Gilles Pargneaux, Pavel Poc, Claudiu Ciprian Tănăsescu, Damiano Zoffoli, Carlos Zorrinho
VERTS/ALE	Benedek Jávor

0	-

6	0
ALDE	Jan Huitema
VERTS/ALE	Marco Affronte, Jill Evans, Barbara Lochbihler, Davor Škrlec, Keith Taylor

PROCEDURE – COMMITTEE RESPONSIBLE

Title	Energy performance of buildings
References	COM(2016)0765 – C8-0499/2016 – 2016/0381(COD)
Date submitted to Parliament	30.11.2016
Committee responsible Date announced in plenary	ITRE 12.12.2016
Committees asked for opinions Date announced in plenary	ENVI 12.12.2016
Rapporteurs Date appointed	Bendt Bendtsen 25.1.2017
Discussed in committee	28.2.2017 29.5.2017 10.7.2017
Date adopted	11.10.2017
Result of final vote	+: 51 –: 1 0: 11
Members present for the final vote	Bendt Bendtsen, Xabier Benito Ziluaga, José Blanco López, David Borrelli, Jonathan Bullock, Cristian-Silviu Buşoi, Jerzy Buzek, Edward Czesak, Jakop Dalunde, Christian Ehler, Fredrick Federley, Ashley Fox, Adam Gierek, Theresa Griffin, András Gyürk, Rebecca Harms, Hans-Olaf Henkel, Eva Kaili, Kaja Kallas, Krišjānis Kariņš, Seán Kelly, Jeppe Kofod, Jaromír Kohlíček, Peter Kouroumbashev, Zdzisław Krasnodębski, Miapetra Kumpula-Natri, Christelle Lechevalier, Janusz Lewandowski, Paloma López Bermejo, Edouard Martin, Angelika Mlinar, Nadine Morano, Dan Nica, Angelika Niebler, Aldo Patriciello, Morten Helveg Petersen, Miroslav Poche, Carolina Punset, Michel Reimon, Paul Rübig, Massimiliano Salini, Algirdas Saudargas, Sven Schulze, Neoklis Sylikiotis, Dario Tamburrano, Patrizia Toia, Evžen Tošenovský, Claude Turmes, Vladimir Urutchev, Kathleen Van Brempt, Henna Virkkunen, Martina Werner, Lieve Wierinck, Hermann Winkler, Anna Záborská, Flavio Zanonato, Carlos Zorrinho
Substitutes present for the final vote	Mario Borghezio, Rosa D'Amato, Jude Kirton-Darling, Olle Ludvigsson, Florent Marcellesi, Luděk Niedermayer
Date tabled	23.10.2017

FINAL VOTE BY ROLL CALL IN COMMITTEE RESPONSIBLE

51	+
ALDE	Fredrick Federley, Kaja Kallas, Angelika Mlinar, Morten Helveg Petersen, Carolina Punset, Lieve Wierinck
GUE/NHL	Jaromír Kohlíček, Paloma López Bermejo, Neoklis Sylikiotis, Xabier Benito Ziluaga
PPE	Bendt Bendtsen, Jerzy Buzek, Cristian-Silviu Buşoi, Christian Ehler, András Gyürk, Krišjānis Kariņš, Seán Kelly, Janusz Lewandowski, Nadine Morano, Angelika Niebler, Luděk Niedermayer, Aldo Patriciello, Paul Rübig, Massimiliano Salini, Algirdas Saudargas, Sven Schulze, Vladimir Urutchev, Henna Virkkunen, Anna Záborská
S&D	José Blanco López, Adam Gierek, Theresa Griffin, Eva Kaili, Jude Kirton-Darling, Jeppe Kofod, Peter Kouroumbashev, Miapetra Kumpula-Natri, Olle Ludvigsson, Edouard Martin, Dan Nica, Miroslav Poche, Patrizia Toia, Kathleen Van Brempt, Martina Werner, Flavio Zanonato, Carlos Zorrinho
VERTS/ALE	Jakop Dalunde, Rebecca Harms, Florent Marcellesi, Michel Reimon, Claude Turmes

1	-
EFDD	Jonathan Bullock

11	0
ECR	Edward Czesak, Ashley Fox, Hans-Olaf Henkel, Zdzisław Krasnodębski, Evžen Tošenovský
EFDD	David Borrelli, Rosa D'Amato, Dario Tamburrano
ENF	Mario Borghezio, Christelle Lechevalier
PPE	Hermann Winkler

Key to symbols:
+ : in favour
- : against
0 : abstention