

AMENDMENTS 001-086

by the Committee on Industry, Research and Energy

Report**Bendt Bendtsen****A8-0314/2017**

Energy performance of buildings

Proposal for a directive (COM(2016)0765 – C8-0499/2016 – 2016/0381(COD))

Amendment 1**Proposal for a directive****Recital 1***Text proposed by the Commission*

(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.

Amendment

(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

(6) The Union is committed to developing a secure, competitive and decarbonised energy system by 2050¹². 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.**

Amendment

(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 CO² 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

(7) The provisions on long-term renovation strategies provided for in Directive 2012/27/EU of the European Parliament and of the Council¹³ should be moved to Directive 2010/31/EU, where they fit more coherently.

Amendment

(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 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-outsourcable 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

(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.

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. ***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

(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

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 (***TFEU***) 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.

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

(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.

Amendment

(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 prejudice 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

(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

inspections are amended to ensure a better result from inspections.

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

(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.

Amendment

(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 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

(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**

the renovation.

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

(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.

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 **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

(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.

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. ***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 (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.

(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.
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

(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 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.

Amendment

(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 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

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;

Amendment

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

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;

(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, ***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 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 efficiency¹⁶, 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

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.

Amendment

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

In addition, the long term renovation **strategy** shall contribute to the alleviation of energy poverty.

Amendment

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

3. To guide investment decisions as referred to in **point (d)** in paragraph 1, Member States shall introduce 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;

(b) **de-risking** energy efficiency operations for investors and the private sector; **and**

Amendment

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, **including by investment platforms**, to make it easier for investors to fund the renovations referred to in paragraph 1;

(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**

(c) the use of public funding to leverage additional private-sector investment or address specific market failures.’

requirements;

(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

(a) in paragraph 1, the second subparagraph is *deleted*;

Amendment

(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

(4) in Article 7, the fifth subparagraph is *deleted*;

Amendment

(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

(a) in paragraph 1, the third subparagraph is **deleted**;

Amendment

(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

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 infrastructure¹⁷, 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.

Amendment

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**.

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.

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

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.

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.

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.

Amendment

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

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.;

Amendment

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 the requirements 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

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.

Amendment

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

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

Amendment

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

part in demand response and contribute to the optimum, smooth and safe operation of the various energy systems and district infrastructures to which the building is connected.

comfort or operational requirements, ***in particular at part load, including by adapting the energy consumption, to*** take 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

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.

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, ***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

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

Amendment

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

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.

covered, regardless of their size and category. The database shall contain the energy consumption data of *buildings 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

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.’;

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 *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

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

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 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*

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.;

efficiency, **at full load and at part load**, and the **heat generator** sizing compared with the heating requirements of the 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

‘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:

Amendment

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

(a) continuously monitoring, analysing and adjusting energy usage;

Amendment

(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

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:

Amendment

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

(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

Amendment

(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

(b) with effective control functionalities to ensure optimum generation, distribution and use of energy.?’;

Amendment

(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

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.

Amendment

1. Member States shall lay down the 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

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:

Amendment

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

(a) continuously monitoring, analysing and adjusting energy usage;

Amendment

(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

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***

(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

(b) with effective control functionalities to ensure optimum generation, distribution and use of energy.

Amendment

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 ***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, ***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

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.

Amendment

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

‘1. 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 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.

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

Amendment

‘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 methodology applied for its determination shall be transparent and open to innovation.

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 under mandate M/480 given by the

for Standardisation (CEN).;

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

‘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.

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.

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.’;

Amendment

‘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, **and possibly also seasonal or monthly**, weighted averages or on more specific information made available for individual district system.

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).'*