Building the future

Background document

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Contents

1 Introduction

The buildings and construction sector emits around 21% of global greenhouse gases[i]. This sector is also highly material demanding. Both impacts are expected to rise, mainly driven by increasing urbanisation and economic development[ii].

The importance of addressing buildings in different policies is critical in Europe too. Buildings are the single largest energy consumer (around 40%), a top emitter (1/3 of emissions from energy), require half of all extracted materials and generate a third of EU's waste[iii] [iv]. In addition, steel and cement, two of the most used materials in buildings are energy intensive products, responsible for 5% and 4% of total EU greenhouse gases emissions, respectively[v] [vi].

Tackling the building sector is crucial to achieve the EU's energy, climate and material efficiency goals. But what policies affect buildings, and how will these transform the industry from now to 2050?

Buildings were extensively discussed in the previous policy cycle, when action on climate change and circular economy were two of the main pillars guiding the European Commission. Sworn in in 2019, the Commission kicked off its work on circular economy in 2020 with its 'New Circular Economy Action Plan'[vii] and on climate change through the 'Fit for 55' communication in 2021[viii].

On one hand, the 'Fit for 55' package involved work on a raft of measures to meet the requirements of the European Climate Law, i.e., reducing 55% of greenhouse gases' emissions by 2030 and reach climate neutrality by 2050[ix]. Many of the polices contributing to the 'Fit for 55' place buildings front and centre.

On the other, circular economy in the sector was much less in the spotlight and policy progress has been limited, if any, even if the construction industry is resource intensive, wasteful and its hunger for materials is growing[x] [xi].

This publication guides the interested reader through the landscape of EU policy measures affecting buildings, sourcing them and plainly explaining their main provisions to provide for a snapshot of how we will build the future. This briefing also provides for a list of references for readers wanting to dig deeper into the provisions reported from the legal texts analysed.

2 Reducing energy use: the Energy Performance of Buildings Directive

The 'Fit for 55' initiative launched in 2021 by the European Commission was a landmark policy drafting and revision exercise of energy and climate measures that has seen action in 19 areas[xii]. According to the European Parliament Research Centre[xiii], this initiative has rapidly ramified into six targeted initiatives on buildings. Among the most noteworthy connected to energy, the main ones are reported in Figure 1.

Figure 1: Buildings and policies related to energy
Legend: EPBD: Energy Performance of Buildings Directive; EED: Energy Efficiency Directive; RED III: Renewable Energy Directive III; ETS 2: Emissions Trading Systems 2; SCF: Social Climate Fund

2.1 EPBD: Directive on the energy performance of buildings

Published on 8 May 2024 in the Official Journal of the European Union, the recast directive on energy performance of buildings (Directive (EU) 2024/1275 - EPBD) is the most central and likely impactful policy targeting the building ecosystem and its decarbonisation[xiv]. The recast text boosts 38 articles and eight annexes, from the previously 31 and three. Some of the most relevant provisions can be related to four macro-areas:

1) renovations and new buildings,
2) energy performance,
3) sustainability, and
4) finance.

As a directive, the EPBD sets in law targets to be reached at EU level by all countries and not individual ones. It is important to note that EU countries have the possibility to diverge from the text in

their transposition, keeping the mandatory provisions as the bare minimum to comply with, nevertheless.

2.1.1 Renovations and new buildings

Articles 3, 7, 8 and 11 include provisions related to renovation plans, newly built, existing and zero-emissions buildings.

Article 3 upgrades the Long-Term Renovation Strategies (LTRSs) into the National Building Renovation Plans (NBRPs), aiming at transforming the building stock into a zero-emitting one by 2050. The nine provisions will make the NBRPs more detailed and streamlined than their predecessors, and mandate countries to prepare an updated renovation plan every five years, insisting on the importance of public consultations with stakeholders along the process[1]. The NBRPs will gradually be phased into the National Energy and Climate Plans (NECPs) as of 2027, a deliverable foreseen in the governance of the EU's energy and climate (Regulation (EU) 2018/1999). Article 3 relies heavily on Annex II outlying the template of the NBRPs, differentiating between mandatory and optional indicators to be included by EU countries in their plans[2]. Working alongside article 3, the renovation passports are streamlined in article 12: these are roadmaps containing renovation measures tailored to individual buildings, typically with a 15-20-year timeline. Renovation passports are harmonised in Annex VIII, which prescribes specific requirements to be included[3] [4].

Article 7 on new buildings has been beefed up with six provisions from the previous two, to make future constructions as climate aligned as possible. The article mandates new buildings owned by public bodies to be zero-emission by 2028, extending this provision to all buildings by 2030. Zero-emission buildings are defined in article 2, 4 and 11. Their main characteristics are reported below in Table 1. These non-emissive buildings go a step further than the nearly zero-energy buildings described in the previous version of the directive, requiring a total primary energy demand at least 10% lower and the quantitative and qualitative characteristics spelled out in the Table 1.

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[1] According to the Impact Assessment accompanying the recast EPBD, consulted stakeholders were largely in favour of strengthening the monitoring of the objectives set in the LTRS, prompting the Commission to develop a template for easier governance. In fact, the review performed by the Commission on the LTRSs submitted between 2020 and 2022 highlighted that countries scored low in the indicator assessing implementation, as well as that on public participation along the drafting process. For more information, consult the and the Commission assessment to the LTRS.

[2] Mandatory indicators and optional indicators are listed for the first three topics the NBRPs will need to elaborate on: 1) overview of the national building stock; 2) roadmap for 2030, 2040, 2050 and 3) overview of implemented and planned policies and measures. For instance, for topic 1) the NRBPs will need to include information on the number of energy performance certificates per building type (including public buildings) as well as per energy performance class, whereas an optional indicator will be providing the same data but per construction period. For topic 3), it is mandatory to report the reduction of whole-life-cycle greenhouse gas emissions for the construction, renovation, operation and end of life of buildings, and the uptake of carbon removals, whereas describing policies and measures on the climate resilience of buildings is optional.

[3] According to the European Commission study on the effectiveness of this tool in frontrunner countries, renovation passports are beneficial as they effectively provide renovation advice, influencing the renovation rate, depth and timing of the works (building owners equipped with renovation passports tend to renovate earlier than they previously planned) as well as the quality of the works. For further reading, see European Commission, Directorate-General for Energy, Volt, J., Fabbri, M., Zuhaib, S. et al., Technical study on the possible introduction of optional building renovation passports – Final report, Wouters, P.(editor), Publications Office, 2020, https://data.europa.eu/doi/10.2833/760324

[4] Annex VIII distinguishes between requirements that must be included in renovation passports (such as current energy performance of the building and graphical representation of the roadmap and its steps for a staged deep renovation among others) as well as optional ones (such as the indicative timing and detailed description of the technologies, techniques and materials to be used during the renovation, as well as their advantages, disadvantages and costs).

Zero-emission buildings vs Nearly zero-energy buildings				
Definition (Art. 2)				Addition (Art. 11)
Energy performance	Energy demand	On-site carbon emission from fossil fuels	Operational GHG generation	Bidirectionality
Very high/ Very high	0, very low/ Nearly 0, very low (to a significant extent covered by renewables)	0/ Not present	0, very low/ Not present	Flexible with energy demand and supply/ Not present

Table 1: Zero-emission and nearly zero-energy buildings

In addition, energy fed to zero-emission buildings should be provided by: (a) energy from renewable sources generated on-site or nearby; (b) energy from renewable sources from a renewable energy community; (c) energy from an efficient district heating and cooling system; and (d) energy from carbon-free sources.

Article 7 introduces provisions on the lifecycle Global Warming Potential (GWP) of buildings. This is a key indicator to convey the embodied carbon of a building (i.e., the carbon emissions related to the whole life cycle of a building), complementing its operational energy demand (e.g., energy required by technical systems such as heating, ventilation and lighting). By January 2027, countries will need to submit to the Commission a roadmap on how they plan to introduce maximum lifecycle GWP values for new buildings starting from 2030 (see Table 2), to be gradually reduced until 2050. Simultaneously, by 2028 large new buildings will need to report in their energy performance certificate their life cycle GWP, with all new buildings mandated to do so in 2030.

Timeline/ milestones	2027	2028	2030
EU countries phase in lifecycle GWP	Roadmap		Limit values
Buildings reporting on lifecycle GWP		Buildings with useful floor > 1,000 m^2	All

Table 2: EPBD milestones for lifecycle GWP in new buildings

Focus on Standard EN 15978 and Annex III of EPBD

One of the successes of the recast EPBD is the phase-in of total lifecycle GWP of buildings via Article 7 and Annex III. The EPBD applies this requirement to new constructions which is a criterion already present in the EU Taxonomy for substantial contribution to climate change mitigation and circular economy - although only its calculation and disclosure[5][xv]. Annex III spells out the methodology to calculate this indicator and it enshrines into law standard EN 15978, which explains how to assess the environmental performance of buildings. This standard needs to be used for data selection, scenario definition and calculations of different environmental aspects and impacts of buildings: the standard covers ten core environmental aspects and impacts, such as lifecycle GWP[6]. The standard can be used to assess renovations and the existing stock too.

Total life cycle GWP		
Form	Content	Time reference
Numeric indicator ($kgCO_2eq/(m^2)$)	Each life-cycle stage of a building	Period of 50 years

Table 3: How will the total life-cycle indicator look like?

EN 15978 is currently under review by the CEN Technical Committee 350 on Sustainability of Construction Works Working Group 1, which aims to adopt it by first half of 2025 in time for its rollout with EPBD transpositions. The Commission is in parallel working to complement the standard with a Union framework supporting the wider uptake of this assessments[7], as only some countries have so far implemented or planned legislation on this topic[xvi].

While article 8 on existing buildings has been mostly left untouched, new general social provisions in 8(3) highlight the 'need to address' indoor environmental quality, adaptation to climate change, fire safety, risks related to intense seismic activity, removal of hazardous substances including asbestos and accessibility for persons with disabilities during 'major renovations'[8].

2.1.2 Energy performance

The recast EPBD successfully introduces provisions targeting the energy performance of buildings with the aim to improve their efficiencies and reduce energy demand. These provisions can be mainly found in articles 5 and 9. The energy performance of a building is usually reported in the energy performance certificates (EPCs) as a numeric indicator of primary energy use in kWh/m^2 per year communicating the energy class the building belongs to on a scale from A to G. Article 5 asks EU countries to introduce

[5] It is important to highlight one inconsistency in the current text of the EU Taxonomy related to this aspect. While the delegated act for climate mitigation includes the disclosure of life cycle GWP for buildings larger than 5000 m^2, the one for circular economy does not include this threshold and applies to all buildings. More information available on the EU Taxonomy Compass EU Taxonomy Compass (europa.eu)

[6] The following environmental impacts are in the standard: global warming potential total (meaning global warming potential of fossil fuels, biogenic resources, land use and land use change), ozone depletion, acidification potential, eutrophication of aquatic freshwater, aquatic marine and terrestrial areas, photochemical ozone formation, depletion of abiotic resources, including minerals, metal and fossil fuels, and water use. The additional six impacts are particulate matter emissions potential, ionizing radiation, eco-toxicity on freshwater, human toxicity (cancer and non-cancer effects), and land-use related impacts such as soil quality.

[7] For more information, please visit the website 'Whole Life-Cycle greenhouse gas emission reporting for buildings. Available online at: Home - Whole Life-Cycle greenhouse gas emission reporting for buildings (wlc-epbd-guidance.eu)

[8] 'Major renovations' are defined in the directive as renovation of a building where: a) the total cost of the renovation relating to the building envelope or the technical building systems is higher than 25 % of the value of the building, excluding the value of the land upon which the building is situated; or b) more than 25 % of the surface of the building envelope undergoes renovation. Whether to use point a) or b) when transposing this directive is up to Member States.

minimum energy performance requirements in buildings to reach at least cost-optimal levels of performances. Minimum energy performance standards (MEPS) are a tool introduced in the new EPBD to force renovation of existing buildings: essentially, MEPS are policy instruments which require buildings to be renovated and improved to meet a specified energy performance at a chosen date or trigger point, e.g., when the building is sold or rented. MEPS can be tightened over time if national legislation allows so.

The energy performance of a building is presented in the EPCs, which article 19 improves and seeks to streamline: in fact, intended as a key communication tool of energy-related information, currently only 10% of EU buildings have one and their quality varies considerably across Europe, with stakeholders asking for better quality EPCs during the revision process of the EPBD[9]. In the previous version of the EPBD, EPCs were issued for public buildings, as well as when buildings were constructed, sold or rented; now the recast version seeks to increase the number of EPCs by adding major renovations and rent renewal as issuance trigger points.

However, it is the new article 9(1) that introduces energy reduction targets on non-residential and residential buildings. The new EPBD foresees a mechanism whereby countries need to identify the least performing buildings and make them more efficient by certain dates. Regarding non-residential buildings, countries need to identify the 16% and 26% least performing, and improve their performances by 2030 and 2033, respectively, via measures to be defined in the NBRPs. The process is synthesised in Table 4.

Non-residential buildings (Art. 9(1))					
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**
Identify non-residential building stock as of 1 January 2020	Define minimum energy efficiency, or performance, standards (MEPS) for non-residential buildings	Define maximum energy demand thresholds (in primary or final energy use in kWh/m^2 per year so to identify: - 16% going above - 26% going above	Improve the efficiency of the worst performing 16% by 2030	Improve the efficiency of the second batch of 10% by 2033	In NBRPs set lower maximum energy demand thresholds by 2040 and 2050

Table 4: Requirements for the non-residential building stock

The same article then focuses on the residential building stock (Art. (9(2)). By end of May 2026, countries need to develop a renovation trajectory in line with 2040' and 2050's decarbonisation targets reducing the average primary energy use in kWh/m^2 per year. The required decrease is of at least 16%

[9] Stakeholders submitting comments to the Commission in view of the recast of the EPBD highlighted the following problems with the current EPC framework: 1) not used widely throughout the EU; 2) not used and presented consistently throughout the EU; 3) low reliability and need for quality improvement; 4) use of sub-optimal rating methodologies for audits; and 5) formulation of poor recommendations. The Commission also noted with concern how the different energy classes of buildings are calculated in EPCs across Europe, and sometimes, even within a single country. More information can be found in the Impact Assessment to the recast EPBD.

by 2030 and at least 20-22% by 2035 compared to 2020 consumption levels. The energy demand reduction trajectory will need to continue for 2040 as prescribed in the NBRPs, and be revised every five years to achieve a zero emitting residential building stock by 2050. Notably, the Commission is mandating that at least 55% of the decrease in energy use is achieved renovating the 43% worst-performing residential buildings, to ensure the biggest gains in terms of energy demand reduction. Article 9(4) also links renovations of worst performing buildings with measures supporting vulnerable households (see section 3.1).

Focus on heating and cooling in the revised EPBD

The recast EPBD tackles the decarbonisation of heating and cooling, encouraging countries to act on fossil fuels-based equipment such as boilers, supporting their phase-out by providing a legal basis in European law. The recast pushes on two main measures to deliver on this goal: the NBRPs, where countries will include reference on how to phase out entirely fossil fuels boilers by 2040 (Annex II(c)(f), and article 13(6), where countries are encouraged to replace fossil fuels boilers in the existing building stock. Finally, by 1 January 2025, EU countries must not provide any financial incentive for the installation of stand-alone boilers powered by fossil fuels (Art. 17(15).

2.1.3 Sustainability

2.1.3.1 Solar energy

Sustainability features are also remarked strongly in the recast EPBD. Two brand new articles are added in the legal text, prescribing mandatory requirements on solar energy and sustainable, mainly private, mobility. The newly introduced article 10 sets forth the requirements related to solar energy, calling for buildings to benefit the most out of solar energy generation *in situ*. EU countries are required to follow a deployment timeline in different kind of buildings, as per Table 5. These provisions focus on new buildings and non-residential buildings, with only existing public buildings concerned. Only the NRBPs will elaborate on countries' measures to address the existing residential stock.

Type of building	Date
All new public and non-residential (useful floor area > 250 m2)	31 December 2026
All existing public buildings	1. Useful floor area > 2000 m2 -> 31 December 2027 2. Useful floor area > 750 m2 -> 31 December 2028 3. Useful floor area > 250 m2 -> 31 December 2030
Existing non-residential buildings with useful floor area > 500 m2*	31 December 2027
All new residential buildings	31 December 2029
All new roofed car parks physically adjacent to buildings	31 December 2029

**If the building undergoes a major renovation, works on the roof or the installation of a technical building system.*

Table 5: Timeline of solar energy deployment in European buildings

2.1.3.2 Sustainable mobility

On the other hand, sustainable private mobility is also receiving a boost via the dedicated new article 14. Requirements on recharging points, pre-cabling and ducting, as well as parking spaces for bicycles are strengthened in the new legal text. Concerning recharging points, the directive makes sure that countries opt for smart systems that can work bidirectionally, operating on non-proprietary and non-discriminatory communication protocols and standards. The different milestones are reported in Table 6.

Features	Non-residential buildings (new & major renovation) > five car parking spaces	All non-residential buildings > 20 car parking spaces, from 1 January 2027	Residential buildings (new & major renovations) > three car parking spaces
Recharging points	Yes, at least one for every five car parking spaces	Yes, at least one for every 10 car parking spaces*	Yes, at least one (only for new construction)
Pre-cabling (i.e., preparation for installation of recharging points)	Yes, at least 50% of car parking spaces	Public buildings only: at least 50% of car parking spaces by 1 January 2033	Yes, at least 50% of car parking spaces
Ducting (i.e., conduits for electric cables)	Yes, for the remaining spaces not pre-cabled	Yes, at least for 50% of the car parking spaces*	Yes, for the remaining spaces not pre-cabled
Bicycle parking spaces	Yes, at least 15% of average or 10% of total user capacity of the building	Yes, at least 15% of average or 10% of total user capacity of the building	Yes, at least two bicycle parking spaces for every residential building unit

** These provisions are mutually exclusive in the legal text*

Table 6: Measures fostering private sustainable mobility

2.1.4 Finance

The renovation of buildings and the achievement of the energy performances set in the EPBD are estimated to total 81 billion EUR of annual energy savings[xvii], making the case for finance to take up a prominent role in the new legal text to speed up these savings. Counting now 19 provisions from the previous seven, article 17 has the objective to channel finance into the transformation of the entire building stock into zero-emitting by 2050, reducing energy costs and upgrading Europe's building stock. Countries will need to streamline finance into buildings' renovations and address market barriers, especially supporting citizens to access public funding and reduce up-front costs.

Article 17(7) explicitly invites countries to consider the following financial measures to reach the objectives of the directive:

- the introduction of energy efficiency loans and mortgages,

- energy performance contracting,
- pay-as-you-save, on-tax and on-bill schemes,
- reduced tax rates on renovation works and materials,
- guarantee funds and mortgage portfolio standards.

The article also mandates the Commission in provision (10) to draft guidelines for financial institutions to support the decarbonisation of their managed assets, connecting even more tightly the decarbonisation of buildings and private finance. Emphasis is also placed on non-economic barriers, such as split incentives, where Member States are invited to act on unanimity requirements in co-ownership structures or allow all parties to be recipients of support (provision 5).

Other tools are at the disposal of European countries to support financially the renovation of their building stock, such as for instance the recently updated State aid guidelines on climate, environment and energy (see section below). In addition, the EU Taxonomy (Regulation (EU) 2020/852) also direct investments into the economic activities most needed for the green transition in the building and construction industry too[xviii].

Focus on state aid on climate, energy and environment

State aid is an important tool at the disposal of EU countries to channel taxpayers' money into economic activities. Regulated by the Commission Directorate General for Competition, state aid disbursement needs to follow determined guidelines drafted by the Commission to be compatible and disbursed. In 2022 the Commission published the revised Guidelines on State aid for climate, environmental protection and energy, also called 'CEEAG', to streamline aid measures into these objectives[xix]. Importantly, the revised guidelines broaden the previous scope of public support to buildings, including now measures addressing their energy and environmental performance. Section 4.2 of the guidelines, in fact, opens the door to aid for energy savings and for reduction of greenhouse gas and air pollutant emissions from buildings, specifically listing as possibly compatible measures on-site renewable energy installations generating electricity, heat or cooling; storage of the energy generated by on-site renewable energy; recharging and ducting infrastructure for electro-mobility; digitalisation of buildings' environmental and energy management and control, as well as other improvements in the buildings stock, including investments in green roofs and equipment for the recovery of rain water. According to the Commission, in 2022 alone countries disbursed 41 billion Euro in aid to pursue environmental protection, including measures targeting energy savings, with Germany topping the list and spending little less than half of it[xx].

2.1.5 Next steps

As a directive, the recast EPBD will need to be transposed by countries before 29 May 2026. Otherwise, the Commission may start infringement procedures against non-compliant countries. This lever is particularly relevant for those that have voted against the recast directive at Council level, such as Italy and Hungary, or abstained, such as Czechia, Croatia, Poland, Sweden and Slovakia. In addition, the Commission is expected to support countries in the implementation phase through delegated and

implementing acts[10], as well as guidelines touching upon a variety of topics as spelled out in article 32 and reported in Table 7.

Indicated timeline	Act	Reference in the legal text	Topic
Adopt act by 29 May 2025	Delegated act	Art. 17(10)	Portfolio framework for financial institutions lending in for energy performance renovations
Deliver report by 30 June 2025	Delegated act	Art. 6(1)	Methodology framework for cost-optimal levels of minimum energy performance requirements
Adopt by 31 June 2025	Implementing act	Art. 22(6)	Establish common templates for the transfer of national information to the EU Building Stock Observatory
Adopt act by 31 December 2025	Delegated act	Art. 7(3)	Union framework for the national calculation of lifecycle GWP
Adopt by 31 December 2025	Implementing act	Art. 16(5)	Interoperability requirements and non-discriminatory and transparent procedures for access to buildings' data
Adopt act by 30 June 2027 (and following implementing acts)	Delegated act	Art. 15(2)	Rating the smart readiness of buildings
Not specified	Delegated act	Art. 31	Updates to calculation of energy performance of buildings

Table 7: Secondary legislation related to EPBD

Focus box on reduction of fluorinated substances in buildings

Two other pieces of legislation are meant to play a role in the buildings of the future. The revised EU F-gas Regulation (Regulation 2024/573[xxi]) and the proposed per-and polyfluoroalkyl substances (PFAS) Restriction Proposal[xxii] under REACH (Regulation 1907/2006) aim to tackle fluorinated substances used in buildings to reduce their climate, environmental and health impacts. Fluorinated gases are human-made chemicals used in refrigerators, heat pumps, air-conditioning, electric power transmission, aerosol spray, inhalers, insulation foam, electronics and industrial manufacturing. The most common ones are hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride: their heat trapping potential, often hundreds if not thousand times that of carbon dioxide, is the main concern urging regulatory action[xxiii]. The revision of the EU F-gas Regulation was adopted in 2024 and mandates a phase-out of the use of hydrofluorocarbons (HFCs) in the Union by 2050 (Annex VII). Alongside phasing out HFCs, some product bans will come into force ensuring that more sustainable heating and cooling systems will be deployed (Annex IV). On the other hand, the proposed PFAS restriction targets persistent chemicals used extensively in modern society: their widespread use and

[10] Delegated acts have the purpose of amend or supplement non-essential elements in the basic act, whereas implementing acts ensure uniform conditions for implementing legally binding EU acts. For more information, please check: Understanding delegated and implementing acts, European Parliament Research Centre.

their persistence in the environment are a source of concern. PFAS in buildings may be found in refrigerants in heating and cooling systems, foam blowing agents for insulation and fluoropolymers.

2.2 Decarbonising domestic heating: the Emissions Trading System 2

Buildings are the largest energy consumer and a top emitter of energy related greenhouse gases. In 2022, water and space heating, alongside space cooling required by far the biggest amount of energy in European households, with 79% or about 8,000 PJ of consumed energy[xxiv] – little less than the amount of Germany's primary energy consumption in 2023. With the 2023 revision of the emissions trading system directive (Directive 2003/87/EC - ETS Directive[xxv]) and the introduction of Chapter IVa, emissions from fuels supplied to buildings' heating systems will be tackled by a copycat of the cap-and-trade mechanism that was first applied to industrial GHG emissions in 2005[xxvi]. As of 2023, therefore, an estimated ¾ of EU-wide greenhouse gas emissions will be covered by this so called 'ETS 2', which will cover also fuels to road transport[xxvii]. In 2027 this separate but parallel ETS system will start to run with the aim to deliver 42% emission reduction in the sectors by 2030 compared to 2005 levels[xxviii]. Notably, ETS 2 will be different than its counterpart applied to industry: it will require allowances from fuel suppliers and not end-users. Fuel suppliers will only start to pay for their allowances in 2028 for emissions produced in 2027; however, the monitoring and reporting of emissions will start from 1 January 2025. At the start, allowances of ETS 1 and 2 will not be tradable for each other, and there will be no free allocation, but full auctioning of ETS 2 allowances. Initially, the number of available allowances for 2027 will be reduced annually by a rate of 5.10%, increasing to 5.38% after 2028. Finally, ETS 2 Article 30 (j) allows countries to impose the cap-and-trade system on other sectors than those listed in Annex I and III (ETS 1 and ETS 2), with Austria and Sweden been the first country to submit the request to do so to the European Commission[11][xxix].

2.3 Renewable Energy Directive III: renewable energy for half of the EU's buildings needs

The revised renewable energy directive (Directive (EU) 2023/2413 – RED III[xxx]) aims to increase the use of renewable energy sources[12] in Europe. This piece of legislation sets in Article 3 an overall renewable energy target of at least 42.5% binding at EU level by 2030 - aiming for 45%, increasing the target substantially from the previous 32%[xxxi]. As European buildings consume a substantial share of energy (around 16,000 PJ each year[xxxii], close to half of the European Union final energy consumption in 2022[xxxiii]), this directive enshrines into law in article 15a an indicative 49% of renewable energy in buildings' final energy consumption by 2030, requiring countries to adapt their legislation to skyrocket the use of renewable energy in new buildings and upon major renovations. In the EU, the current amount of renewable energy consumed in buildings is estimated to be around 23%[xxxiv]: 20% for heating and cooling[xxxv], and the electricity grid received almost 40% from renewables in 2022[xxxvi]. In the heating and cooling sector, the directive mandates each country to increase the share of renewable energy by at least 0.8 percentage points as an annual average for the

11 Austria is planning to introduce carbon pricing on the following activities: civil aviation (international and domestic), railways, water-borne navigation (international and domestic), agriculture, forestry, fishing, fish farms, stationary combustion, off-roads vehicles and other machinery mobile combustion, as well as vehicles used by the military with combustion technology. Sweden, instead, is aiming at railways, waterborne navigation, off-road transportation and agriculture, forestry and fishing.

12 Renewable energy sources, or renewable energy, are defined in the directive as energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, osmotic energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas.

period 2021 to 2025 and by at least 1.1 percentage point for the period 2026 to 2030 from the baseline year of 2020 (Art. 23). Finally, the directive is clear in pushing public buildings to take an 'exemplary role' leading on these efforts by exceeding the required minimum, providing, for instance, for roofs to be used by third parties for production of renewable energy (Art. 15a(4)).

Focus on the revision of the electricity market design

The recent reviews of Regulation (EU) 2019/943[xxxvii] on the internal market for electricity (amended via Regulation (EU) 2024/1747[xxxviii]) and Directive (EU) 2019/944[xxxix] on common rules for the internal market for electricity (amended via Directive (EU) 2024/1711[xl]) are meant to reduce the prices of electricity for European customers. Notably, Regulation 2024/1747 introduces Chapter IIIa – Specific investment incentives to achieve the Union's decarbonisation objectives, where articles 19a and 19d describe how power purchase agreements[13] and two-way contracts for difference[14] can hedge customers from future high electricity prices. On the other hand, Directive (EU) 2024/1711 introduces articles 28a on protection from disconnections from the grid of vulnerable customers and customers affected by energy poverty.

2.4 Energy Efficiency Directive demands more efficient use of energy in buildings

The recast energy efficiency[xli] directive (Directive (EU) 2023/1791 - EED[xlii]) is another piece of legislation meant to shape the buildings of the future by reducing the energy demand in the building stock. The directive binds EU countries to ensure at least 11.7% reduction in energy consumption by 2030 compared to 2020 in article 4. As a practical outcome, in the same article the EU commits to reduce its energy consumption in 2030 to no more than 992.5 million tonnes of oil equivalent (Mtoe) for primary energy and 763 Mtoe for final energy consumption[xliii]. These are significant improvements considering the current consumption (1,258 and 940 Mtoe)[xliv], and enhanced reduction from the previous targets of 1,483 Mtoe of primary energy and 1,086 Mtoe of final energy[xlv]. Buildings will need to contribute to cut yearly final energy consumption of at least 1.3%, 1.5% and 1.9% in 2024-2025, 2026-2027 and 2028-2030, respectively, averaged over the most recent three-year period preceding 1 January 2019. These energy savings obligations are spelled out in Article 8. According to Article 3 of the directive, the principle of 'energy efficiency first' will need to be applied to buildings' planning and policies, and a 3% of public buildings' heated or cooled total floor will need to be renovated each year (see also section 2.1.1), with the aim to transform them into at least nearly zero-energy buildings consistently with the EPBD's overall energy use reduction (Art. 6). Article 25 also introduces the obligation for regional and local authorities to develop local heating and cooling assessment plans at least in municipalities having a total population higher than 45,000 inhabitants, to assess the introduction of the most resource- and cost-efficient solutions for heating and cooling decarbonisation.

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[13] "power purchase agreement" or "PPA" means a contract under which a natural or legal person agrees to purchase electricity from an electricity producer on a market basis. More information can be found on the European Union Agency for the Cooperation of Energy Regulators' website: https://www.acer.europa.eu/electricity/market-monitoring/ppas

[14] "two-way contract for difference" means a contract between a power-generating facility operator and a counterpart, usually a public entity, that provides both minimum remuneration protection and a limit to excess remuneration. More information can be found here: https://fsr.eui.eu/contracts-for-difference/

3 The social aspects connected to the decarbonisation of buildings

Buildings are one of the main targets of decarbonisation policies. People spend close to 90% of their time in them, highlighting the inevitable social connotation decarbonisation policies must consider. Alongside their decarbonisation via, mostly, a technology replacement or improvement approach, European co-legislators made sure to support this transition adding social provisions to energy and climate legislations to reduce the burden of the transition on the population and groups in need of support, mandating countries to provide for financial and technical assistance.

3.1 The social aspects of the EPBD

The recast EPBD is set to improve the European building stock and support vulnerable households in their green transition. This is clear from the revised legal text: from little mention to 'vulnerable households' and 'energy poverty' in the previous version, the recast counts over 20 references for the former and 19 for the latter. The new text includes definitions of 'vulnerable households' (Art. 2(28)) and 'energy poverty' (Art. 2(27))[15], and mandates countries to report on these issues in the NBRPs in a more thorough fashion. To reach the objective of a zero-emissive building stock, the directive clearly relies on countries' financial strategies to support their citizens: article 17(1) and (3) mandates to provide for financing and support measures to reach this objective, addressing up-front costs in renovations. Article 17(4) elaborates further on this, providing the legal basis for countries to design financial measures that support renovations based on income levels, and paragraph (11) and (14) open the door to aggregated projects and packaged solutions that may be more bankable for investors to mobilise capital in renovations. The same article also invites countries to ensure banks offer green mortgages and green loans, secured and unsecured, in a non-discriminatory manner linked to the achievement of energy performances and emissions' reductions. The directive also calls on countries to ensure that financial support is targeted first towards vulnerable households affected by energy poverty, supporting, for instance, the introduction of rent caps (Art. 17(19)) and avoiding renovictions (Art. 17(17)).

When applying measures to improve the energy performance, countries must support vulnerable households, people suffering from energy poverty and people living in social housing: the support does not only entail financial measures as also technical assistance via dedicated one-stop shop[16] is key (Art. 18). One-stop shops were barely mentioned in the previous version of the EPBD, included under an article on exchange of information. The recast puts this measure in the spotlight requiring countries to make sure these facilities are inclusive and target all actors potentially involved in buildings renovation. Countries will need to make sure that one-stop shops are present across their territory, particularly where the average age of the building stock is above the national average or in locations

[15] 'Vulnerable households' are defined in the directive as households in energy poverty or households, including lower middle-income households, that are particularly exposed to high energy costs and that lack the means to renovate the building that they occupy. 'Energy poverty' is defined instead as a household's lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes. The latter is defined in the EED (Directive 2023/1791)

[16] One-stop shops (OSS) are single suppliers who could be in charge of an entire renovation project and an interface between the beneficiary and the entire supply chain and decision-making process, including financial and legal aspects, monitoring and delivery. For more information please check: https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/one-stop-shops-building-renovation-integrated-solution-close-gap-between-customers-and-suppliers-2021-07-19_en

that can be easily reached. One-stop shops will also need to offer dedicated services for vulnerable households, people affected by energy poverty and people in low-income households. As a directive, countries have greater room to design legislative complying vehicles, and is up to them to devise ways to remove non-economic barriers, including split incentives[17]. In addition, European legislators were mindful of the need to treat differently specific categories of buildings, such as those having specific architectural and historical merits or worship places, giving Member States the freedom to choose if to extend or not to these the application of the minimum energy performance mechanism reported above.

The importance of indoor environmental quality (IEQ)[18] in the recast EPBD is another clear social aspect the legislation tries to support: this is visible with the addition of its definition in article 2(66) and its featuring in both NBRPs and newly built units. IEQ has been proven to have direct effects on people's health, comfort, wellbeing and productivity[xlvi], and, in article 13 on technical systems, the directive adds clear provisions on it: it mandates countries to seek a healthy indoor climate, and, specifically in non-residential zero-emission buildings, require measuring and control devices by May 2026 (Art. 14(9)(d)). The directive also explicitly opens the door to countries' further action in this domain, if willing to.

3.2 The Social Climate Fund and the EED

The Social Climate Fund (SCF) can be used by countries during the period from 2026 to 2032 to support vulnerable groups affected by a carbon price following road transport and buildings inclusion in the ETS 2 as explained in section 2.2[xlvii]. The SCF consists of up to 65 billion Euro and will be fed by the selling of ETS2 emission allowances (Art. 10). The Commission estimates that around 85 billion Euro will be mobilised to tackle the objectives listed in countries' Social Climate Plans, drawn up to detail how support will be disbursed (Chapter II). These plans will be submitted to the Commission by June 2025 and evaluated before disbursement begins. The following target groups are listed as priority:

- vulnerable households, such as those in a situation of energy poverty, or suffering from high energy costs and having no means to upgrade the building they live in,
- vulnerable micro-enterprises, defined as those which do not have the means to renovate the building they occupy, purchase zero- and low-emission vehicles or switch to alternative sustainable modes of transport, including public transport.

The disbursements are expected to ensure affordability of measures such as 1) renovation of the worst-performing buildings, including social housing, 2) access to affordable energy-efficient housing, 3) building decarbonisation, such as electrification of heating, cooling and cooking, and 4) support for renewable energy integration and energy communities. The projects financed by this fund should all

[17] 'Split incentives' are defined in the EED (Directive 2023/1791) as the lack of fair and reasonable distribution of financial obligations and rewards relating to energy efficiency investments among the actors concerned, for example the owners and tenants or the different owners of building units, or owners and tenants or different owners of multi-apartment or multi-purpose buildings.

[18] Indoor environmental quality (IEQ) is defined in the directive as the result of an assessment of the conditions inside a building that influence the health and wellbeing of its occupants, based upon parameters such as those relating to the temperature, humidity, ventilation rate and presence of contaminants. Aspects usually related to IEQ are indoor air quality, thermal comfort, daylight and artificial lighting as well as acoustic comfort.

respect the principle of 'do not significant harm', which the Commission is currently tailoring to the Fund disbursement's management[19].

Finally, also the recast European Energy Directive (EED) includes social provisions. The directive enshrines 'energy poverty' for the first time into the EU acquis, and in its article 8(3) requires that a share of energy savings is to be achieved in vulnerable households, forcing countries to prioritise the improvements of their energy performances. As explained in section 2.1.2, the EPBD follows suit requiring prioritisation of vulnerable households living in energy poverty. Finally, EED's article 24 mandates countries to empower and protect people affected by energy poverty: energy efficiency improvements are one of the best tools to fight energy poverty, and the article is clear in asking EU countries to design these measures principally for vulnerable groups and support them via public finance and with technical expertise.

Focus on supporting urban green spaces with the Nature Restoration Law

The Nature Restoration Law (Regulation (EU) 2024/1991), adopted in June 2024, set a legal framework for countries to act on the long-term and sustained recovery of biodiverse and resilient ecosystems on land and sea areas. Countries are expected to restore at least 20% of land areas and at least 20% of sea areas by 2030, and all ecosystems in need by 2050. To do so, countries will also need to focus on urban areas: article 8 of the Regulation supports the restoring and further development of urban ecosystems, mandating, on one hand, EU countries to refrain from downsizing green spaces in cities, and, on the other, to support their expansion from 2031 onward, including through the integration of urban green space into buildings and infrastructures[xlviii].

[19] For more information please see: Consultation on the application of the "DNSH" principle under the Social Climate Fund - European Commission (europa.eu)

4 Reducing material extraction and consumption in the construction industry

Buildings in Europe are estimated to require half of all extracted materials and generate a third of EU's waste[xlix]. Regulatory work on the material side of buildings has moved ahead in this policy cycle, with the revision of the Construction Products Regulation (CPR) (Regulation (EU) No 305/2011) and the inclusion of construction products within the scope of the new Eco-design Regulation (ESPR) (Regulation (EU) 2024/1781[l] [20]. However, the need to reduce the amount of materials consumed by the construction industry is key, and the European Union is far from transposing the concept of sufficiency[21] on buildings and the construction industry. Prioritising and optimising the use of existing constructions and spaces over new builds, as well as supporting policies favouring repurposing of vacant buildings and supporting multiple use and sharing spaces are all actions that could help reduce the amount of material the sector yearly consumes[li].

4.1 Energy Efficiency Directive demands more efficient use of energy in buildings

The recast energy efficiency[22] directive (Directive (EU) 2023/1791 - EED[lii]) is another piece of legislation meant to shape the buildings of the future by reducing the energy demand in the building stock. The directive binds EU countries to ensure at least 11.7% reduction in energy consumption by 2030 compared to 2020 in article 4. As a practical outcome, in the same article the EU commits to reduce its energy consumption in 2030 to no more than 992.5 million tonnes of oil equivalent (Mtoe) for primary energy and 763 Mtoe for final energy consumption[23]. These are significant improvements considering the current consumption (1,258 and 940 Mtoe)[liii], and enhanced reduction from the previous targets of 1,483 Mtoe of primary energy and 1,086 Mtoe of final energy[liv]. Buildings will need to contribute to cut yearly final energy consumption of at least 1.3%, 1.5% and 1.9% in 2024-2025, 2026-2027 and 2028-2030, respectively, averaged over the most recent three-year period preceding 1 January 2019. These energy savings obligations are spelled out in Article 8. According to Article 3 of the directive, the principle of 'energy efficiency first' will need to be applied to buildings' planning and policies, and a 3% of public buildings' heated or cooled total floor will need to be renovated each year (see also section 2.1.1), with the aim to transform them into at least nearly zero-energy buildings consistently with the EPBD's overall energy use reduction (Art. 6). Article 25 also introduces the obligation for regional and local authorities to develop local heating and cooling assessment plans at

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20 While the Construction Products Regulation is considered the main piece of legislation addressing construction products, the new ESPR opens the door to construction products and clearly states in recital 50 and article 18(6) that the Commission may tackle the performance requirements and information requirements concerning the environmental footprint and carbon footprint of cement where the CPR does not deliver. In addition, the revised ESPR also includes iron and steel in its priority working plan to be adopted by the Commission by April 2025 (art. 18(5)(a), with the EU Joint Research Centre already at work to develop ecodesign requirements for steel.

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[22] Energy efficiency is defined in the directive as the ratio of output of performance, service, goods or energy to input of energy.

[23] Primary energy consumption (PEC) is defined in the directive as gross available energy, excluding international maritime bunkers, final non-energy consumption and ambient energy; final energy consumption (FEC) instead means all energy supplied to industry, to transport, including energy consumption in international aviation, to households, to public and private services, to agriculture, to forestry, to fishing and to other end-use sectors, excluding energy consumption in international maritime bunkers, ambient energy and deliveries to the transformation sector and to the energy sector, and losses due to transmission and distribution as defined in Annex A to Regulation (EC) No 1099/2008.

least in municipalities having a total population higher than 45,000 inhabitants, to assess the introduction of the most resource- and cost-efficient solutions for heating and cooling decarbonisation.

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6 Reducing material extraction and consumption in the construction industry

Buildings in Europe are estimated to require half of all extracted materials and generate a third of EU's waste[lviii]. Regulatory work on the material side of buildings has moved ahead in this policy cycle, with the revision of the Construction Products Regulation (CPR) (Regulation (EU) No 305/2011) and the inclusion of construction products within the scope of the new Eco-design Regulation (ESPR) (Regulation (EU) 2024/1781[lix] [29]. However, the need to reduce the amount of materials consumed by the construction industry is key, and the European Union is far from transposing the concept of sufficiency[30] on buildings and the construction industry. Prioritising and optimising the use of existing constructions and spaces over new builds, as well as supporting policies favouring repurposing of vacant buildings and supporting multiple use and sharing spaces are all actions that could help reduce the amount of material the sector yearly consumes[lx].

Figure 2: Buildings and materials related polices
Legenda: CPR: Construction Products Regulation; WFD: Waste Framework Directive

6.1 Environmental credentials of construction products: the Construction Products Regulation

The CPR details harmonised rules for the marketing of construction products in the EU[lxi]. Covering materials from concrete to bricks, as well as products such as windows, this regulation clarifies how

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and what products can access the EU market. According to the Commission, its revision was meant to fine-tune the legal text to two main objectives: (1) achieve a well-functioning single market for construction products and to (2) contribute to the objectives of the green and digital transition, particularly the establishment of a modern, resource-efficient and competitive economy[lxii]. Specifically on the second objective, the revised CPR mandates the disclosure of environmental impacts of construction products in a harmonised way across Europe via environmental product declarations (EPDs) [31] to be added to declaration of performance and conformity (DoPCs). Manufacturers will conduct a lifecycle assessment on an extensive range of environmental indicators as per Annex II of the revised CPR[32]. This obligation will be gradually applying to products placed on the market: according to article 15, manufactures will have to disclose lifecycle GWP as of 8 January 2026 additional nine indicators by 9 January 2030 and eventually all 16 indicators by 2032, i.e., a full EPD. Finally, Article 83 of the revised CPR opens the door to green public procurement as a pull measure to streamline the adoption of green construction products: starting in 2026, the European Commission will work on delegated acts that specify mandatory minimum environmental sustainability requirements for construction products in the framework of public procurement.

Focus on the use of freshwater in the construction industry

Freshwater demand in the 27 EU Member States (EU-27) is met largely by abstraction from surface waters (rivers, reservoirs and lakes) and groundwater. The European Union adopted in 2000 the Water Framework Directive (Directive 2000/60/EC) with the aim to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater[lxiii]. In 2019, 204,112 million cubic meters were extracted for different economic purposes, with public water supply accounting for 20%, manufacturing for 13% and water used by the construction industry for 1%[lxiv][33]. According to Eurostat, households' water use from public supply varies with the median around 40-50 cubic meters per inhabitant[lxv]. Regarding manufacturing, publicly available data are scarce, a gap that the revised CPR will partially fill in by mandating the disclosure of water use in EPDs by 2029 (see section 4.1). For concrete, a rule of thumb is that around 200 litres of water are required for a cubic meter, with variations based on the type of concrete. Steel, on the other hand, generally requires from 1.6 to 3.3 cubic meters per tonne, according to the World Steel Association[lxvi]. Beside the lack of available data at product level, it is also worth noting that the 1% attributed to construction works is underestimated due to the lack of proper reporting: in fact, many EU countries do not report, or report discontinuously, to Eurostat the amount of freshwater used by the construction industry[lxvii].

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[31] Environmental product declarations (EPDs) are a description of the environmental aspects and impacts of a product, system or service over its entire life, from raw material extraction, through manufacturing and use, to end-of-life disposal or recycling.

32 The environmental indicators to be included into DoPCs are the following: by 8 January 2026 climate change effects (GWP total, GWP fossil, GWP biogenic, GWP luluc); by 9 January 2030 ozone depletion, acidification potential, eutrophication aquatic freshwater, eutrophication aquatic marine, eutrophication terrestrial, photochemical ozone, abiotic depletion, abiotic depletion (fossil fuels), water use; by 9 January 2032 particulate matter, ionizing radiation (human health), ecotoxicity (freshwater), human toxicity (cancer), human toxicity (non-cancer), land-used related impacts.

[33] In these statistics, the construction industry refers to the activities included in the Group F – Construction, as reported in European Union statistical system for economic activities, i.e., the NACE system Rev 2. More information can be found here: NACE Rev. 2 - Statistical classification of economic activities - Products Manuals and Guidelines - Eurostat (europa.eu). Generally, water in construction is used for site cabins and temporary accommodation; general site activities including tool washing; wet trades, such as brickwork, screeding, concreting and plastering; groundworks, including grouting and drilling; dust suppression, including road and wheel washing; hydro-demolition; cleaning of tools and plant equipment, lorry washing; and commissioning and testing of building plant and services.

6.2 Waste Framework Directive

The Waste Framework Directive (Directive 2008/98/EC - WFD) spells out the basic principles and definition related to waste management in the European Economic Area[lxviii]. Regarding construction and demolition waste – the largest waste stream in terms of volume[lxix], the 2018 revision of the WFD added provisions on this type of waste, mandating national governments to achieve a 70% weight ratio of reused, recycled, recovered or backfilled waste (Art. 11(2)b). According to recent studies by the EU Joint Research Centre (JRC), countries are achieving this target overly relying on downcycling construction and demolition waste to backfilling[lxx]. With the expected increase in construction activities and consequent demolition waste in the coming years, making better use of construction and demolition waste is imperative: to this extent, waste-specific targets should be set by the Commission in the assessment mandated in art. 11(6). To support the uptake of circular economy in the industry, experts of the CEN Technical Committee 350 Subcommittee 1 on 'Circular Economy in the Construction Sector' are starting work foreseeing the development of standards on topics such as reuse, circular economy assessments and circular design. In addition, the EU Commission Joint Research Centre is also working on defining end-of-waste criteria for inert construction and demolition waste to support a harmonised secondary market in the Union.

Focus on the EU protocol and guidelines on construction and demolition waste

In August 2024 the Commission Directorate General for Economic Growth released and updated version of its non-binding protocol and guidelines on construction and demolition waste[lxxi]. The protocol covers aspects such as waste identification, separation and collection, waste logistics and processing, quality management and related policies. Addressed at all stakeholders, the updated version highlights that pre-demolition and pre-renovation audits 'offer insights into quantities and types of materials, construction products and waste and best management options, providing an overview of resources available for preparing for re-use or recycling and of which hazardous substances or materials to expect'. These audits are crucial to allow buildings' owners to understand what resources are available in the building and streamline circularity in the construction industry; however, as of today only some European countries are implementing this practice in unharmonized fashion[lxxii], evidencing the need for further action to increase circularity. A 2018 study by the JRC reports on economic and regulatory drivers in some best environmental practices in the sector, spanning from processing of construction and demolition waste to produce recycled aggregates, to local schemes for proper management of waste and asbestos[lxxiii].

7 What lies ahead for European buildings?

7.1 Stakeholders in the building sector

Different stakeholders active in the building sector have released their position paper in the months ahead of the European elections and the formation of the new Commission to influence political groups' manifestos and, consequently, the Commission political guidelines by putting buildings and their future in the spotlight.

ECOS, with other sixteen civil society, NGOs, and business organisations have drafted a manifesto calling for a sustainable, just and resilient transition in the built environment. The partners are calling for a Commissioner with direct responsibility on sustainable housing, with the aim to link together social, climate, and economic security. The manifesto calls for buildings decarbonisation to be incorporated into housing plans and EU sustainable building policy measures to be tightened in line with the EU's climate targets. Importantly, existing funds for retrofitting, renovation and affordable housing should be consolidated into a single Facility hosted by the European Investment Bank[lxxiv].

Buildings Performance Institute Europe (BPIE) lists 10 policy priorities for the next Commission to make European buildings enhance the stability, resilience, well-being and equity of Europe and its economy. The think-tank identifies current buildings' excessive energy consumption, greenhouse gas emissions, resource use, and construction and demolition waste generation as not sustainable. To solve these issues, it stresses the importance of swift and ambitious transpositions and implementations of the EPBD, alongside a renewed focus on the sustainability of construction products and smart energy systems. Key to the think-tank is that financial flows are channelled into the current building stock as discussed in section 2.1.4. Finally, the think-tank reflects on the social value of buildings and pushes for the 'green buildings diplomacy' to become part of EU global climate diplomacy[lxxv].

In its European Manifesto for a sustainable built environment, the World Green Building Council European Regional Network lists eight priorities. Top of the list is the need to address carbon emissions, whether embodied or operational, followed by enhancing circular economy and ensure that healthy buildings are mainstreamed. Water also features the manifesto, with the network calling for greater attention to this aspect. Finance features the manifesto too, as well as the need for buildings and the construction industry to be more resilient and mindful of biodiversity and nature. Finally, the manifesto elaborates on the social aspects of the built environment focussing on its just transition, calling for access to safe and sustainable homes, communities and employment for all citizens[lxxvi].

Efficient Buildings Europe, an industry association, insists on the need to develop an industrial policy that support the uptake of efficient energy solutions, as well as the swift implementation of EU policies agreed in the previous cycle. It also calls for more money to be invested in the sector, with the enlargement of the Social Climate Fund and mobilisation of private finance towards renovations. The association also highlights the need to focus on people's skills and training in energy efficiency[lxxvii].

7.2 European political groups, the 2024-2029 Commission guidelines and the Mission Letter for the Energy and Housing Commissioner

European political groups have put forward different asks related to buildings in the run-up to the European elections of 2024. Most of these refer to improving energy performances and the social role buildings and housing play in Europe.

- The European People's Party manifesto calls for the creation of an Energy Union that leads to a carbon-neutral and environmentally friendly future, promising to channel investments into households' renovations needs, support accessible house ownership for families[lxxviii].
- The Party of the European Socialists and Democrats highlights the strong link between climate and social justice, stressing the importance of the Social Climate Fund and putting forward the idea of a European housing strategy. The party wants to make affordable, quality and energy efficient housing more available, supporting households suffering from energy poverty[lxxix].
- While Renew Europe's manifesto does not explicitly mention buildings, the group's position paper on competitiveness features the need to enhance energy performances of the current building stock, as well as deploying renewables that would decrease reliance on fossil fuels. Circular economy is also mentioned as a growth engine[lxxx].
- The Identity and Democracy Party (ID) did not draft a manifesto for the 2024 elections, and is replaced by the new group Patriots for Europe.
- The European Greens calls for climate neutrality by 2040 and more home renovations and retrofits while supporting circular economy. Praising the 'energy efficiency first' principle in EU legislation, the party pledges to fight energy poverty and supports the introduction of energy guarantees to provide all households with enough energy at affordable prices. The manifesto also calls for housing to become a right, highlighting how underinvestment in the sector has led to a lack of quality, well-insulated affordable social housing. The Greens also calls for rent caps measures and limits on short-term tourist rentals to deflate the rent bubble in cities suffering from it. Finally, the manifesto calls for the expansion of the Social Climate Fund to extend support to low-income households and their transition[lxxxi].
- The European Conservatives and Reformists manifesto does not include reference to buildings nor housing[lxxxii].
- The Party of the European Left supports climate neutrality by 2035, highlights the cost-of-living crisis and calls for the right to have decent, affordable and climate friendly housing coupled with basic energy security. The Party holds that energy security should be a human and legal right granting free energy for households. The party also supports the drafting of a directive capping rents and prohibiting fixed term tenancies, as well as forced evictions. The party also stresses the importance of a European fund supporting social housing[lxxxiii].

Taking all this into account, on Thursday 18 July, European Commission president Ursula von der Leyen presented her political guidelines for 2024-2029, receiving the greenlight from the European Parliament by committing to uphold the European Green Deal, moving swiftly on the implementation of its policies and promising the delivery of a Clean Industrial Deal and Affordable Energy Action Plan to decarbonise and bring down energy prices. Von der Leyen also puts housing in the spotlight, hearing calls from the Socialists, the Greens and the Left, and planning to present the first ever European Affordable Housing Plan, linking these actions to the deployment of the Social Climate Fund discussed

in section 3.2[lxxxiv] Von der Leyen also designated the first ever Commissioner for Energy and Housing, Dan Jørgensen, stressing in his mission letter that he will need to bring down prices for European households via an Action Plan on Affordable Energy Prices, as well as a Citizen Energy Package to increase citizens' participation in the energy transition[lxxxv].

As described above, the spotlight on buildings is still front and centre in Europe; buildings' sustainability and their social aspects are closely intertwined. The need to build a sustainable future is also clearly exemplified by the nomination of Dan Jørgensen, a veteran on climate negotiations, former climate and energy minister of Denmark, a European country with a high penetration of renewables in its electricity mix and a strong social housing culture. Time will tell if this new Commissioner will bring along the much-awaited benefits: Civil society organisations will play their part in making sure that promises and commitments are met with actions on the ground.

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