



NOVEMBER 2024

# EXECUTIVE SUMMARY



EU BUILDINGS CLIMATE TRACKER  
3<sup>RD</sup> EDITION



# EXECUTIVE SUMMARY

- **THE BUILDINGS SECTOR IS LAGGING ON CLIMATE GOALS**

The EU Buildings Climate Tracker highlights that the buildings sector remains significantly off track, with key indicators – CO<sub>2</sub> emissions, energy consumption, renewable energy share and renovation investments – over 40% behind 2030 and 2050 target pathways.

- **2022 PROGRESS FALLS SHORT AS DECARBONISATION GAP WIDENS**

The decarbonisation gap has more than doubled since 2016, underscoring the urgent need for accelerated, transformative action across the EU.

- **SLOW TRANSFORMATION IN BUILDINGS THREATENS EU PROSPERITY AND SOCIAL EQUITY**

Insufficient decarbonisation progress risks health, stability and energy security, especially for vulnerable communities.

- **RIGOROUS EPBD IMPLEMENTATION MUST DRIVE TRANSFORMATION**

EU Member States must prioritise rigorous implementation of the Energy Performance of Buildings Directive to accelerate decarbonisation and renewables uptake.

- **BOLD EU LEADERSHIP: BETTER BUILDINGS AS A PATH TO PROSPERITY AND UNITY**

The European Commission should place building decarbonisation at the core of its strategy to drive sustainable prosperity in Europe.

# EU BUILDINGS ARE SIGNIFICANTLY OFF TRACK TO CLIMATE NEUTRALITY.

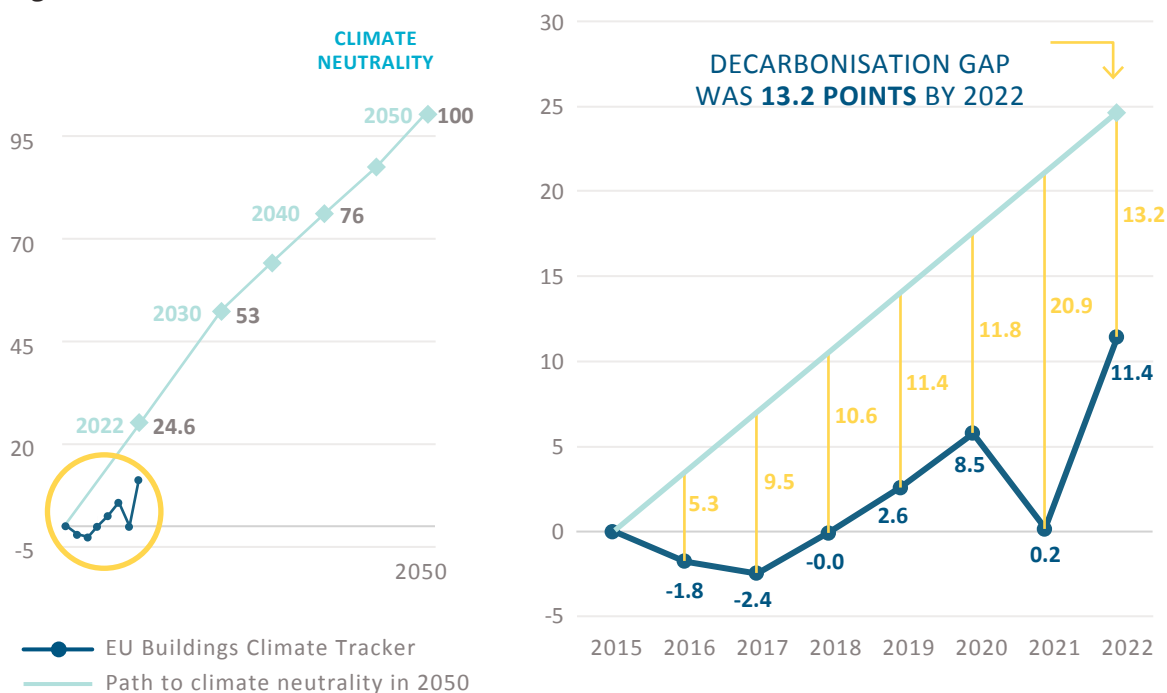
Heating and cooling of buildings is one of the largest sources of greenhouse gas emissions in Europe. As the EU and its Member States have established clear goals for reducing these emissions, progress requires close scrutiny. To evaluate whether the sector is on track to achieve carbon neutrality, BPIE has developed the European Buildings Climate Tracker (EU BCT), now in its third edition.

The latest index reveals that the EU buildings sector is significantly off track to meet its 2030 and 2050 climate goals. Overall, the four key indicators of the EU BCT – CO<sub>2</sub> emissions reduction, final energy consumption, renewable energy share and renovation investments – are over 40% away from the necessary decarbonisation pathway.

**With 2022 marking the halfway point toward our 2030 climate milestone since the Paris Agreement, the starting point of our tracking, the stark reality is that progress at the current pace will not achieve the 2030 targets. Alarmingly, the decarbonisation gap in 2022 has more than doubled since 2016.**

The Tracker is based on a 100-point scale, starting at zero in 2015 and reaching 100 for climate neutrality in 2050. In 2022, the difference between the tracker and the climate neutrality path exceeded 13 decarbonisation points, underscoring inadequate progress. This shortfall is primarily due to insufficient reductions in final energy consumption, a slow rollout of renewable heating and cooling, and unrealised renovation investments.

**Figure 1:** EU BCT results between 2015 and 2022



**Between 2018 and 2022, building decarbonisation showed modest progress compared to 2015.** However, 2021 saw a significant deviation from this positive trend, likely due to short-term factors such as the post-COVID recovery in the service sector and increased heating demands during a particularly cold winter.

While 2022 data may visually suggest strong progress, it largely reflects a return to previous trends rather than a meaningful advancement. This progress is primarily attributable to short-term actions, such as voluntary targets to reduce gas consumption by at least 15% as a direct economic reaction to the energy crisis.<sup>1</sup> The progress observed is therefore likely temporary and does not reflect strategic long-term measures needed for sustained change.

Policymakers should consider this context to avoid overestimating progress and ensure that long-term structural actions are prioritised. At the outset of the index in 2015, an annual decarbonisation progress of approximately 3.6 points was required to align with the reference path toward climate neutrality. Due to insufficient progress in recent years, this requirement has now risen to 5.2 points annually, indicating the need for significant additional efforts. If CO<sub>2</sub> emissions are not promptly reduced, future mitigation and adaptation efforts will become increasingly challenging and costly.

## KEY FIGURES

- **CO<sub>2</sub> EMISSIONS** from building energy use have decreased by just **14.7%** since 2015, far below the required 27.9% reduction by 2022. This shortfall has resulted in an additional **367 million tonnes of CO<sub>2</sub>** being emitted into the atmosphere, equivalent to nearly a year's worth of emissions from the entire EU building stock.
- **FINAL ENERGY CONSUMPTION** in buildings has dropped by only **2.8%**, while the target was a **6.5%** reduction. **The reduction is happening at less than half of the required pace.**
- **RENEWABLE ENERGY SHARE** has increased by only **6.3%**, far below the target of an **18% increase** by 2022, primarily due to slow adoption of renewable heating and cooling systems. Renewable uptake specifically for heating and cooling must quadruple.
- **INVESTMENT IN BUILDING RENOVATION** remains a major barrier, with investments reaching only **60.6%** of the required target for 2015-2022. This underinvestment will make future renovations more challenging and likely more expensive.

<sup>1</sup> <https://eur-lex.europa.eu/EN/legal-content/summary/coordinated-demand-reduction-measures-for-gas.html>

**With 2022 marking the halfway point toward our 2030 climate milestone since the Paris Agreement, the starting point of our tracking, the stark reality is that progress at the current pace will not achieve the 2030 targets. Alarming, the decarbonisation gap in 2022 has more than doubled since 2016.**

## SLOW TRANSFORMATION OF BUILDINGS IS NOT JUST A CLIMATE PROBLEM; IT'S A PEOPLE PROBLEM.

Buildings that emit less CO<sub>2</sub> are better for people: they promote physical and mental health, enhance financial stability, support social equity, strengthen resilience in crises and improve energy security. Rising energy costs driven by post-COVID economic shifts and the energy crisis following Russia's invasion of Ukraine have exacerbated energy poverty, now impacting 9.3% of the EU population<sup>2</sup>. In 2022, households faced energy bills 24% higher than pre-2020 averages,<sup>3</sup> leaving many in energy-inefficient homes vulnerable to volatile prices. Poor building conditions, which affect 15.5% of EU residents, are linked to respiratory health issues, higher healthcare costs and mental health concerns.<sup>4</sup> Healthier, energy-efficient buildings can improve mental well-being at home, speed up recovery times for hospital patients, reduce employee turnover in healthcare and reduce overall medical costs. In workplaces and schools, enhanced indoor conditions can boost productivity and learning outcomes, adding substantial economic value across the EU.<sup>5,6</sup>

Decarbonising buildings also presents a unique opportunity for job creation, with estimates suggesting 12 to 18 local jobs generated per million euros invested,<sup>7</sup> and up to 160,000 additional green jobs in the construction sector could emerge by 2030.<sup>8</sup> Investing in energy-efficient, renewable-powered buildings can drive innovation, bolster resilience and elevate quality of life – especially for those most affected by energy poverty and substandard living conditions.

## CALL TO ACTION FOR MEMBER STATES: IMPLEMENT THE EPBD QUICKLY AND EFFECTIVELY

Recent legislative milestones, particularly the 2024 recast of the Energy Performance of Buildings Directive (EPBD) and key components of the Fit for 55 package, can lead the EU back on track to climate neutrality. These provide Member States with the necessary tools to significantly accelerate building decarbonisation, reduce emissions, enhance climate resilience and address societal challenges such as increasing energy prices and energy poverty.

**The recast EPBD represents a powerful opportunity for Member States to lead decarbonisation at the scale and pace required for climate neutrality.** It introduces new standards for building emissions, minimum renovation requirements, a zero-emission goal for 2050, and a strengthened advisory and financial framework. While the EPBD sets clear mandates for action, it also allows Member States to exceed these minimums, potentially advancing climate progress significantly. To fully leverage the EPBD's potential, Member States should prioritise rigorous, timely implementation with a strong emphasis on accelerating new standards and enhancing energy performance in renovations.

**Prioritising vulnerable communities within the EPBD implementation process is crucial.** Building decarbonisation must consider social impacts and ensure that all communities, especially those most affected by energy poverty, benefit from healthier living environments. Accessible financial and technical resources are essential for achieving an equitable, climate-resilient transition and fostering social cohesion. Member States should leverage their existing building inventories and available data to gain a clear understanding of their building stock's current state. This approach will enable them to prioritise actions in areas of greatest need, exceed baseline requirements and ensure long-term gains.

<sup>2</sup> <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20230911-1>

<sup>3</sup> Based on data from ODYSSEE database

<sup>4</sup> According to data from Eurostat database in 2023

<sup>5</sup> [https://ec.europa.eu/eurostat/databrowser/view/ilc\\_mdho01/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ilc_mdho01/default/table?lang=en)

<sup>6</sup> <https://www.bpie.eu/publication/building-4-people-valorising-the-benefits-of-energy-renovation-investments-in-schools-offices-and-hospitals/>

<sup>7</sup> [https://iea.blob.core.windows.net/assets/c3de5e13-26e8-4e52-8a67-b97aba17f0a2/Sustainable\\_Recovery.pdf](https://iea.blob.core.windows.net/assets/c3de5e13-26e8-4e52-8a67-b97aba17f0a2/Sustainable_Recovery.pdf)

<sup>8</sup> [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_1836](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_1836)



## CALL TO ACTION FOR THE EUROPEAN COMMISSION: BOLD LEADERSHIP ON BUILDINGS NEEDED

**With a new five-year EU policy cycle imminent, strong leadership from the EU Commission is critical to ensure that building decarbonisation becomes central to Europe's strategic agenda**

For too long, the potential of building decarbonisation to address a range of pressing issues has been underestimated. Prioritising transformation of the EU building stock is not just a climate imperative; it is a strategic move that directly supports the EU's wider goals of economic growth, energy security, social equity, inclusivity and global competitiveness. Taking a slow approach to decarbonisation not only weakens our climate efforts but also undermines Europe's prosperity, weakening our standing on the global stage.

**As Europe navigates complex geopolitical, social and environmental challenges, the Commission must seize the opportunity to foster resilience and inclusivity, fully embedding this commitment in the 2024-2029 mandate.** By making building decarbonisation a cornerstone of Europe's prosperity strategy, the Commission will drive resilience and inclusivity, tackling energy poverty, boosting public health and creating jobs. These priorities resonate across the political spectrum, benefiting all Europeans.

Europe's role as a global leader is not a given; it depends on proactive, determined efforts to stay ahead. The Commission should lead decisively by ensuring that Member States fully implement the EPBD, scaling up support and enforcing the rules as they have been agreed.

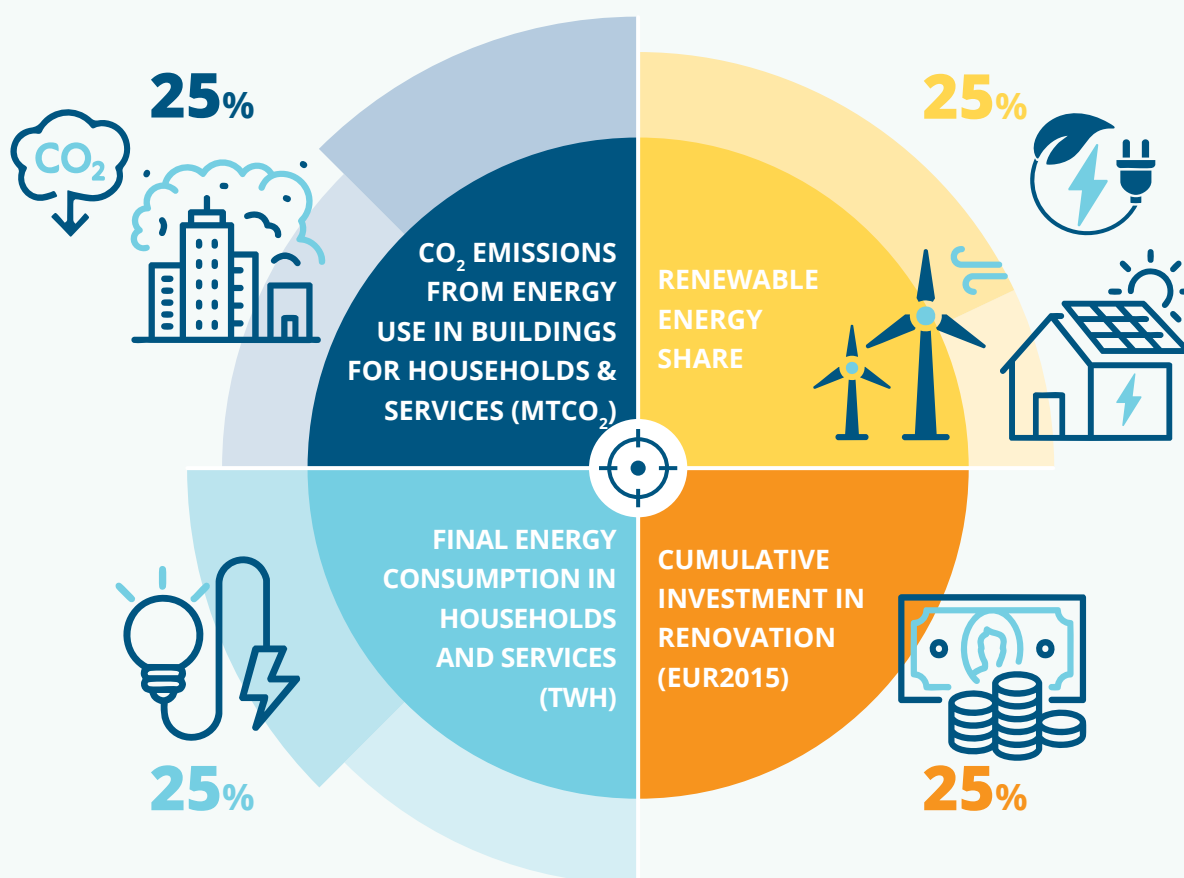
**By fostering innovation, securing energy independence and promoting the well-being of communities, Europe can solidify its position as a leader on the world stage, demonstrating the value of sustainable and inclusive growth.**

# WHAT IS THE EU BUILDINGS CLIMATE TRACKER (EU BCT)?

The **EU BCT** is a composite index that measures progress towards decarbonising the EU building stock, a crucial step for achieving climate neutrality by 2050. Developed by BPIE, the tracker evaluates four key indicators: (i) CO<sub>2</sub> emissions, (ii) final energy consumption, (iii) renewable energy share, and (iv) investment in renovation.<sup>9</sup>

The EU BCT tracks progress since the adoption of the Paris Agreement in 2015, enabling policymakers to evaluate the effectiveness of various initiatives, such as the Renovation Wave and the recast of the EPBD, Energy Efficiency Directive (EED) and Renewable Energy Directive (RED III). By analysing these metrics, the EU BCT answers critical questions regarding the evolution of building decarbonisation and the necessary improvements needed to achieve climate neutrality by 2050.

**Figure 2:** Indicators and their weighted contribution to the EU Buildings Climate Tracker



## RESULTS OF THE EU BCT 3<sup>RD</sup> EDITION: PROGRESS FROM 2015-2022

Overall, all four main indicators are more than 40% away from the climate neutrality path, which has led to the significant decarbonisation gap observed by the EU BCT. Table 1 provides an overview of the results and progress of all the indicators between 2015 and 2022, compared to the target values for 2022 from the reference path. The indicators are also analysed on a normalised scale to understand better the magnitude of the gaps observed.<sup>10</sup>

<sup>9</sup> Based on the MIX scenario from the impact assessment accompanying the Communication 'Stepping up Europe's 2030 climate ambition'

<sup>10</sup> A detailed analysis and description of the indicators can be found in chapter II of the full report



Table 1: Summary of indicator results

Indicator	Achieved progress 2015-2022	Required progress 2015-2022	STATUS	How much of the required progress was achieved during 2015-2022?
<b>1</b> CO <sub>2</sub> emissions emissions from energy use in buildings for households and services	↓ 14.7%	↓ 27.9%	OFF TRACK	
	households ↓ 12.6%	↓ 29.3%	FAR OFF TRACK	
	service-sector ↓ 19.8%	↓ 24.5%	OFF TRACK	
<b>2</b> Final energy consumption in households and services	↓ 2.8%	↓ 6.5%	FAR OFF TRACK	
	households ↓ 1.4%	↓ 8.3%	FAR OFF TRACK	
	service-sector ↓ 5.4%	↓ 3.1%	ON TRACK*	
<b>3</b> Renewable energy share	↑ 6.3 percentage points (increased from 22.6% to 28.9%)	↑ 18.0 percentage points (should have increased from 22.6% to 40.6%)	FAR OFF TRACK	
	heating & cooling ↑ 4.6 percentage points (increased from 20.3% to 24.9%)	↑ 19.7 percentage points (should have increased from 20.3% to 40%)	FAR OFF TRACK	
	gross electricity consumption ↑ 11.5 percentage points (increased from 29.7% to 41.2%)	↑ 12.8 percentage points (should have increased from 29.7% to 42.4%)	ALMOST ON TRACK	
<b>4</b> Cumulative investment in renovation	8 times the value in 2015	13.8 times the value in 2015	OFF TRACK	

\*The progress observed during 2020-2022 was not a result of improvements in the building stock but rather driven by short-term demand-reduction measures<sup>11</sup>, including voluntary targets to reduce gas consumption by at least 15% as a direct economic reaction to the energy crisis. While some energy use rationalisation may persist, this progress is likely temporary. It is important to monitor the development of this indicator after 2022 to assess whether the observed progress is a result of structural improvements related to long-term policies or temporary reactions to the special circumstances previously mentioned.

### HOW TO READ THE RESULTS IN TABLE 1?

- The **achieved progress** corresponds to the difference between the observations in 2022 and 2015.
- The **required progress** corresponds to the difference between the required target for 2022 in the reference path and the starting point in 2015.
- In the last column to the right, each house in the scale represents 10%. If the target was fully achieved, all 10 houses on the scale would be bold.

<sup>11</sup> <https://eur-lex.europa.eu/EN/legal-content/summary/coordinated-demand-reduction-measures-for-gas.html>



### Indicator 1

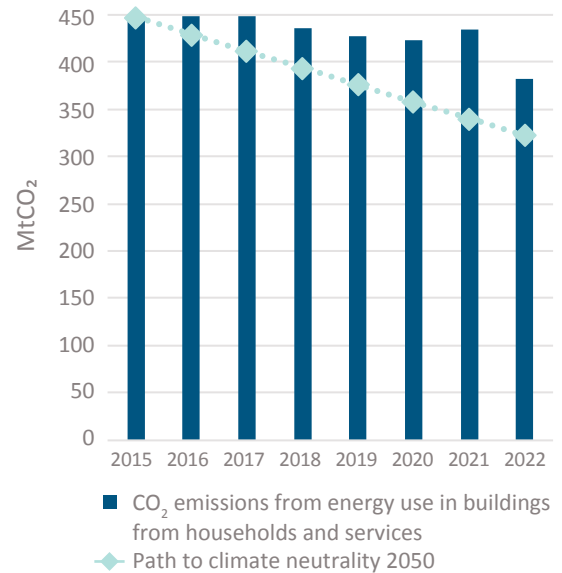
## CO<sub>2</sub> EMISSIONS

**CO<sub>2</sub> emissions reduction from energy use in buildings for households and services is happening at half the required pace.**

From 2015 to 2022, emissions decreased by only 14.7%, falling short of the required 27.9% decrease. This resulted in approximately 367 million tonnes (Mt) of additional CO<sub>2</sub> emissions since 2015, equivalent to nearly a year's operation of the entire EU building stock.

- Although emissions reached their lowest level since 2015 at 381.7 MtCO<sub>2</sub> in 2022, they still exceeded the target value for 2022 by 18.4%.
- If immediate action isn't taken, the unrealised reductions will lead to greater future mitigation and adaptation costs.

**Figure 3:** CO<sub>2</sub> emissions from energy use in buildings for households and services 2015-2022



### Indicator 2

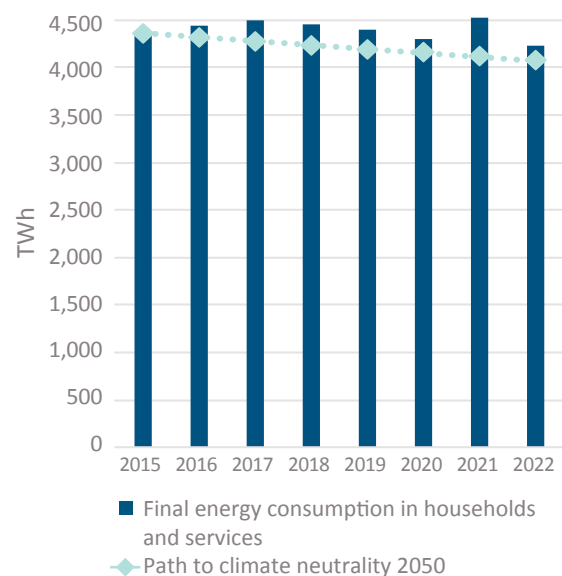
## FINAL ENERGY CONSUMPTION

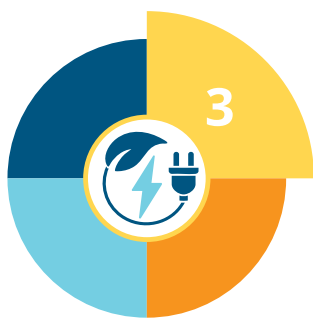
**Reduction of final energy consumption in buildings is happening at less than half the required pace.**

Final energy consumption in households and services remains far from targets, achieving only a 2.8% reduction against the required 6.5%.

- After a steady decrease from 2017 to 2020, consumption surged by 5.2% in 2021, reaching 4,530 terawatt-hours (TWh) due to higher heating needs and increased home office work.
- A slight decrease to 4,234 TWh occurred in 2022 due to warmer weather, but it still remains 4.0% above the target.
- During 2015-2022, final energy consumption in households and services should have decreased by 6.5%, but instead only 2.8% was achieved. **The reduction is happening at less than half of the required pace.**

**Figure 4:** Final energy consumption in households and services 2015-2022





### Indicator 3

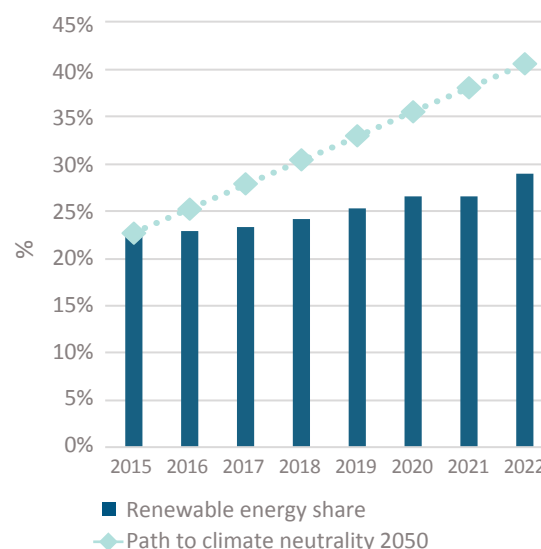
## RENEWABLE ENERGY SHARE

Despite some progress, renewable energy share is not growing fast enough.

The renewable energy share in buildings has only increased by 6.3 percentage points since 2015, significantly below the required 18 percentage point increase.

- As of 2022, the renewable share reached 28.9% when the target value for 2022 was 41%.
- This slow growth is primarily due to inadequate expansion of renewable energy for heating and cooling.

Figure 5: Renewable energy share 2015-2022



### Indicator 4

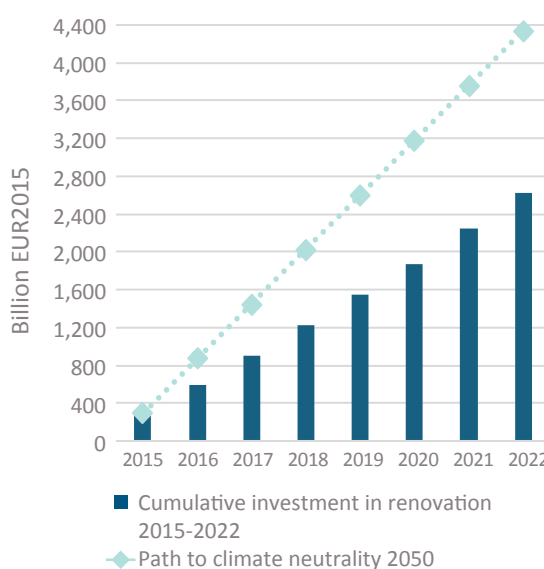
## INVESTMENT IN RENOVATION

Investments in renovation fall one third below the target.

Cumulative investments in building renovation remain significantly off track, summing up to only 60.6% of the required total for the 2015-2022 period. By 2022, investments reached just €2,629 billion (in 2015 EUR), falling far short of the €4,335 billion target.

- The existing investment gap hampers the energy performance of the building stock, leading to higher energy bills and increased future renovation costs.
- Key challenges such as high upfront costs, fluctuating fossil fuel prices, limited access to funding, split incentives and various non-monetary barriers persist, hindering progress.<sup>12</sup>

Figure 6: Cumulative investment in renovation 2015-2022



<sup>12</sup> <https://www.bruegel.org/policy-brief/how-finance-european-unions-building-decarbonisation-plan>

# Policy recommendations to Member States

The recast EPBD gives a clear mandate to Member States to accelerate building decarbonisation, with a strong emphasis on robust implementation of the Directive that prioritises the needs of vulnerable households. A comprehensive national policy framework must provide clear guidance to the full value chain of the buildings and construction sector and will generate a range of benefits for individual citizens and society at large. The following recommendations are designed with this aim in mind.



I

## ADOPT CARBON-CUTTING BUILDING STANDARDS WELL ON TIME FOR EPBD SCHEDULE

Member States should accelerate adoption of zero-emission standards across all buildings, leverage renovation to cut emissions, and set clear life-cycle carbon limits to support national climate goals.

### ESTABLISH ZERO-EMISSION STANDARDS FOR NEW AND EXISTING BUILDINGS EARLY IN EPBD TRANSPOSITION PROCESS

- **EPBD requirement:** Articles 7 and 11 introduce zero-emission building (ZEB) standards, mandating that new buildings achieve zero emissions as of 2028 for public buildings and as of 2030 for all new buildings.
- **Recommendation:** Member States should adopt the ZEB standard for new buildings early in the transposition process to ensure it is communicated effectively to stakeholders. This will enable smooth compliance for buildings constructed as of 2028/2030, allowing them to meet Zero-Emission Building (ZEB) standards with ease. To maximise impact, these standards should be extended to existing buildings being renovated. This approach will broaden CO<sub>2</sub> emissions reductions beyond new builds.

### USE GREENHOUSE GAS EMISSION INDICATORS IN RENOVATION POLICIES

- **EPBD Provision:** Article 9 allows Member States to adopt greenhouse gas emission indicators, measured in kgCO<sub>2</sub>eq/(m<sup>2</sup>y), for building renovation projects.
- **Recommendation:** Member States should use this option to explicitly link renovation efforts with emission reductions, supporting national climate targets.

### SET LIFE-CYCLE GREENHOUSE GAS TARGETS FOR NEW BUILDINGS

- **EPBD Provision:** Under Article 7(5), national roadmaps must include limits on total cumulative life-cycle global warming potential (GWP) for new buildings to progressively reduce as of 2030 onwards.
- **Recommendation:** Member States should establish clear guidelines for measuring, disclosing and limiting the life-cycle GWP of new buildings, strictly adhering to the EPBD schedule of 01/01/2027. Member States should take inspiration from proven approaches of frontrunner countries and base their guidelines on the EU methodological framework as much as possible to ensure rapid up take, consistent impact reduction and comparability across the EU.

## REDUCE FINAL ENERGY CONSUMPTION THROUGH EFFECTIVE MINIMUM ENERGY PERFORMANCE STANDARDS (MEPS) AND A STRONG RENOVATION TRAJECTORY

Member States should ensure robust MEPS for the non-residential sector, and that the trajectory for the progressive renovation of residential buildings prioritises the worst-performing buildings and vulnerable groups, notably through national MEPS.

### DEFINE A CLEAR RENOVATION PATH FOR RESIDENTIAL BUILDINGS

- **EPBD provision:** Article 9(2) calls for a progressive renovation trajectory for residential buildings for the reduction of the average primary energy of this segment of the building stock.
- **Recommendation:** Given current delays in improving energy performance, Member States should consider that the reduction of primary energy use mandated by the EPBD should be accompanied by a 16.7% reduction in final energy consumption by 2030 (compared to 2022) to realign with climate targets.

### EMPHASISE ENERGY EFFICIENCY ALONGSIDE RENEWABLE ENERGY IN RENOVATIONS

- **EPBD provision:** The renovation trajectory under Article 9(2) relies on primary energy use metrics.
- **Recommendation:** Member States should ensure that energy efficiency improvements accompany renewable energy installations to avoid inefficiencies while enhancing comfort and health in buildings, which do not materialise if carbon reduction is achieved only through decarbonising energy supply.

### PRIORITISE RENOVATION OF THE VERY WORST-PERFORMING RESIDENTIAL BUILDINGS

- **EPBD provision:** At least 55% of the decrease in primary energy must come from the renovation of the 43% worst-performing residential buildings.
- **Recommendation:** To maximise social and energy benefits, Member States should prioritise renovating first the very worst-performing residential buildings within the 43%, as they often house vulnerable populations. Member States should also aim to achieve more than 55% of savings through these renovations.

### IMPLEMENT MEPS FOR NON-RESIDENTIAL BUILDINGS

- **EPBD provision:** Article 9(1) requires the introduction of MEPS for non-residential buildings, allowing for certain exemptions.
- **Recommendation:** Member States should carefully assess the impact of any exemptions to ensure that a significant portion of the building stock remains covered by MEPS. Neglecting a large portion of the building stock would jeopardise the energy savings potential of this provision.

## ACCELERATE AND EXPAND THE RENEWABLE ENERGY SHARE

Member States should focus on decarbonising heating and cooling and put Energy Efficiency First to accelerate fossil fuel phase-out by 2040.

### ADOPT A HOLISTIC APPROACH TO BUILDING DECARBONISATION BY USING COMPLEMENTARY INDICATOR

- **EPBD provision:** Article 9 establishes primary energy use as the indicator for the renovation trajectory, and primary or final energy use for the MEPS for non-residential, while giving the possibility to use other complementary indicators on top of those.
- **Recommendation:** Member States should consider additional indicators for non-renewable and renewable energy use, and CO<sub>2</sub> emissions, to better track decarbonisation, particularly in heating and cooling where more renewable energy uptake is needed.

### SUPPORT DIVERSE RENEWABLE ENERGY SOLUTIONS BEYOND SOLAR

- **EPBD provision:** Article 10 mandates the deployment of solar energy installations on certain categories of buildings by certain dates.
- **Recommendation:** Given that the growth rate of the renewable energy for heating and cooling must quadruple to get on track with climate neutrality, Member States should also offer support for other renewable technologies, especially for heating and cooling, prioritising renewables other than biofuel technologies, which currently dominate renewable space heating.

### PRIORITISE ENERGY EFFICIENCY IN RENEWABLE ENERGY SYSTEM INSTALLATIONS

- **EPBD provision:** Some of the provisions in Articles 13, 17 and Annex II focus on heating and cooling energy supply.
- **Recommendation:** These provisions should be leveraged but their implementation should be combined with the application of the "energy efficiency first" principle to prevent sub-optimal renewable installations in inefficient buildings, optimising investments.

### PHASE OUT FOSSIL FUEL BOILERS BY 2040

- **EPBD provision:** Annex II requires Member States to describe in their NBRP the implemented and planned policies and measures with a view to a complete phasing out of fossil fuel being used in boilers by 2040.
- **Recommendation:** Member States should use the legal basis offered by the EPBD Article 13§1 to set strong requirements at national level on heat generators, in order to replace boilers powered by fossil fuels in existing buildings as soon as possible before 2040.

## IV

### RAPIDLY INCREASE AND SCALE UP INVESTMENT IN BUILDING RENOVATION

Member States should promote specific financial support for deep renovations, monitor social impacts and prioritise accessible funding for vulnerable groups to drive equitable progress toward zero-emission buildings.

#### PROMOTE HIGHER FINANCIAL SUPPORT FOR DEEP AND STAGED DEEP RENOVATIONS

- **EPBD provision:** The EPBD mandates incentives for deep renovations.
- **Recommendation:** Member States should align the higher financial support towards (staged) deep renovations to the execution of renovation requirements (e.g. MEPS, trajectory) in order to incentivise renovation projects to go beyond minimum requirements, avoid lock-in effects and make best use of the financial resources available.

#### ENSURE SPECIAL FINANCIAL SUPPORT FOR VULNERABLE GROUPS

- **EPBD provision:** Member States must reduce barriers, such as upfront costs and split incentives, especially for vulnerable households.
- **Recommendation:** Member States should ensure optimal use and fair distribution of public financial resources, prioritising support for vulnerable populations to promote inclusive progress toward zero-emission buildings.

#### MONITOR SOCIAL IMPACTS OF RENOVATION PROGRAMMES AND FINANCIAL TOOLS

- **EPBD provision:** Article 9(4e) calls for monitoring the social impacts of MEPS-related financial tools.
- **Recommendation:** Member States should expand social impact monitoring to other renovations, especially those targeting low-income households, to understand and address energy poverty and improve overall health and equity in housing.

INDICATOR + STATUS

TOOLS EPBD

CONSIDERATIONS FOR THE EPBD IMPLEMENTATION

OTHER CONSIDERATIONS

WHY IS ACCELERATION REQUIRED?

**CO<sub>2</sub> EMISSIONS**

from energy use in buildings for households & services (MtCO<sub>2</sub>)

**OFF TRACK**



**ART. 7**  
(New buildings)



**ART. 9**  
(Renovation)



- Zero-emission standards in new buildings as early as possible
- Use complementary indicators for CO<sub>2</sub> emissions for Minimum Energy Performance standards for non-residential and trajectory for residential building stock
- Define clear principles on how to measure, disclose and limit whole-life carbon of buildings

**BUILDING DECARBONISATION ACTIONS SHOULD:**

Not be limited to achieving a minimum requirement but rather take into consideration the status and the unrealised progress until now

Be well-targeted, accessible, and properly timed measures for the decarbonisation of the building stock

Be aligned with integrated and comprehensive approaches to unlock multiple benefits at the individual but also at the societal level

Be combined with strategies to capture and monitor data on multiple benefits on environment, social, and economic matters

Better buildings to live, learn, work, and recover, with increased indoor comfort, productivity, and multiple health benefits for building users

More employment, economic savings from performance improvement

Better allocation and use of financial resources

Reduced dependency on fossil fuels and volatile markets

Socio-economic security for building users

Financial resources directed to mid-to-long-term solutions

**FINAL ENERGY CONSUMPTION**

In households and services (TWh)

**FAR OFF TRACK**



Mainly due to the slow reduction of final energy consumption in households

**ART. 10**  
(Solar energy)



**ART. 11**  
(ZEBs)



- Consider that the progress observed between 2020-2022 in the service sector may be temporary and linked to the Covid-19 and energy crisis
- Consider that the final energy consumption in households needs to reduce 16.7% by 2030 compared to 2022 to get back on track towards climate neutrality
- Prioritise the energy efficiency first principle
- Prioritise the improvement of worst-performing residential buildings

**RENEWABLE ENERGY SHARE**

**FAR OFF TRACK**



Mainly due to the slow increase of the share of renewables for heating and cooling

**ART. 13**  
(Building systems)



**ART. 17**  
(Finance)



- Use complementary indicators for primary renewable energy for MEPS for non-residential buildings
- Support diverse renewable technologies
- Prioritise the energy efficiency first principle
- Prioritise the decarbonisation of heating and cooling, while continuing the progress in renewables for electricity supply

**CUMULATED INVESTMENT**

in renovation (EUR2015)

**OFF TRACK**



**ANNEX II**  
(Template NBRP)



- Follow a "higher impact, higher support" principle
- Properly time and target the diverse financial mechanisms to support the ones that needed the most
- Couple EPC, building renovation passports, and one-stop-shops considerations with financial mechanisms
- Align individual renovation activities with national plans to avoid lock-in effects
- Monitor social impacts not only of MEPS but other mechanisms as well