



THE RECAST EPBD

A treasure chest of opportunities for building decarbonisation

08/05/2024

| H l ne Sibileau

Online





BUILDINGS PERFORMANCE INSTITUTE EUROPE

Who we are, what we do



EUROPEAN
NON-PROFIT
THINK-TANK



POLICY ADVICE
ON BUILDING
REGULATION,
FROM DESIGN TO
IMPLEMENTATION



BRUSSELS
AND
BERLIN



INDEPENDENT
RESEARCH AND
ANALYSIS



IMPROVING THE
ENERGY
PERFORMANCE
OF BUILDINGS
ACROSS EUROPE



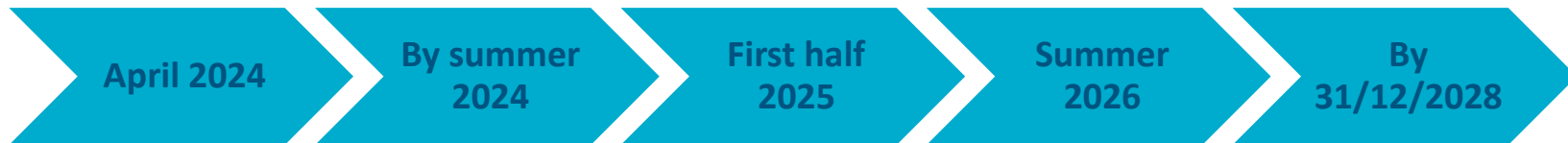
IN OPERATION
SINCE 2010



THE RECAST EPBD

Introduction - timeline

Other specific dates highlighted in thematic slides



- Adoption by Parliament and Council*



- Publication in Official Journal of the EU
- Start of transposition period (2 years)

- Commission Guidance on EPBD

- End of transposition period

- Review of the EPBD

* With abstention from Poland



EPBD is the main legislative driver for change in the buildings sector

Change is needed (lack of decarbonisation progress)

Recast can be powerful boost to building renovation & decarbonisation

EU legislation impactful only if implemented

Opportunity now lies in Member States hands





THE RECAST EPBD

BPIE PUBLICATION

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THE EPBD DECRYPTED
**A TREASURE CHEST OF OPPORTUNITIES TO
ACCELERATE BUILDING DECARBONISATION**



RECAST EPBD

Four main building blocks

Updated standard for new buildings

Renovation policies for existing buildings

Social fairness considerations

Planning for the 2050 vision and H&C decarbonisation

A stronger enabling framework
(information, advisory, and financial support)





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Updated standard for new buildings

Zero Emission Building (ZEB)

A very high energy performance
linked to cost-optimality and NZEB

Fully decarbonised buildings,
but not necessarily entirely renewables based

A timeline to be coordinated with the solar mandate

A progressive integration of lifecycle thinking





Updated standard for new buildings

Zero Emission Building (ZEB)

Timeline: standard to apply

- To new *public* buildings as of **01/01/2028**
- To *all* new buildings as of **01/01/2030**

Energy performance

- “*Very high energy performance [...] zero or very low amount of energy*” (threshold to be set at national level)
- But at least equivalent to most recent cost-optimal levels & primary energy use 10% lower than national NZEB threshold in place in 2024

Sources of energy

- Objective: no on-site carbon emissions from fossil fuels & zero or very low amount of operational GHG emissions
- Eligible energy sources: on-site/nearby RES, RES from energy community, efficient DHC, energy from “carbon free sources”. As an alternative: “energy from the grid”.
- Solar mandate: **by 31/12/2026** for new public and non-residential buildings, **by 31/12/2029** for all new residential buildings

Other aspects for new buildings

- Offer flexibility re: energy grid integration
- Lifecycle thinking: **as of 2030**, lifecycle GWP calculated and disclosed through EPC, and limit values set by Member States based on common methodology



Updated standard for new buildings

Zero Emission Building (ZEB)

By 31/12/2025

The Commission must adopt a Delegated Act to amend Annex III to set out a Union framework for the national calculation of lifecycle global warming potential.

2027

- Based on the Delegated Act, by 01/01/2027 Member States must publish a roadmap detailing the introduction of limit values on total cumulative lifecycle global warming potential for all new buildings, and set targets and limit values for new buildings from 2030, aiming at a progressive downward trend.
- There will also be Commission guidance to support this exercise.





Updated standard for new buildings

Zero Emission Building (ZEB)

2028

- From 01/01/2028, Member States must ensure that the lifecycle global warming potential is calculated in accordance with Annex III and disclosed through the energy performance certificate for all new large buildings (useful floor area $>1,000\text{m}^2$).
- In calculating and setting cost-optimal levels, to be submitted by 30/06/2028, Member States may take into account lifecycle global warming potential.

From 01/01/2030

All new buildings should comply with the ZEB standard, have their lifecycle global warming potential calculated and disclosed through the EPC, and comply with the limit values on total cumulative lifecycle global warming potential set at national level.





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Renovation policies for existing buildings

Requirements per building segments



Minimum Energy Performance Standards
for non-residential buildings

Mandatory national trajectory for the progressive
renovation of the residential stock

The EPBD facilitates MEPS implementation

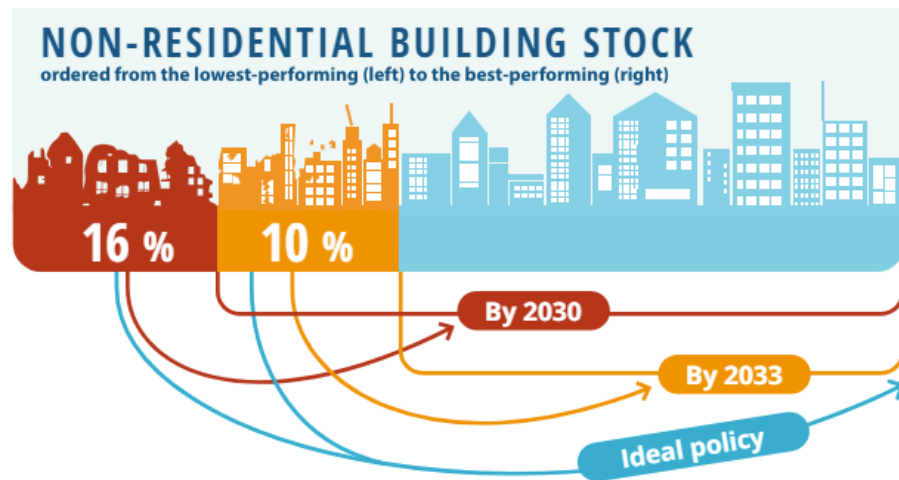
Public buildings



Renovation policies for existing buildings

Non-residential buildings

- Member States to set up Minimum Energy Performance Standards (MEPS)
- Renovate 26% of worst performing buildings by 2033
 - tranche 1 = 16% WPB **by 2030**
 - tranche 2 = 10% **by 2033**
- General exemptions
- Specific individual exemptions for some non-residential buildings, under some limits
- Compliance checked at individual level based on EPCs or other means



Renovation policies for existing buildings

Residential buildings

TRAJECTORY FOR THE PROGRESSIVE RENOVATION OF THE RESIDENTIAL STOCK

at least **-16% (2020-2030)** and **-20/22% (2020-2035)**

Minimum **55%** savings
from the renovation of
SPECIFIC RESIDENTIAL BUILDINGS

Maximum **45%** savings
from the renovation of
OTHER RESIDENTIAL BUILDINGS

43%
**WORST PERFORMING
RESIDENTIAL BUILDINGS**

**RESIDENTIAL BUILDINGS
AFFECTED BY NATURAL
DISASTERS**

Also eligible buildings =
57% **BEST PERFORMING
RESIDENTIAL BUILDINGS**

- Set at national level (latest **2 years after entry into force**, within NBRP)
- Expressed as reduction of primary energy use
- Adds national milestones in 2040/2045 with a view to ZEB stock in 2050
- To be fulfilled by a mix of
 - regulatory measures (MEPS)
 - financial support
 - technical assistance





Renovation policies for existing buildings

Requirements per building segments

EPBD facilitates EPBD implementation

- No MEPS without enabling framework
- Exemption allowed for specific building categories
- Penalties set at national level
- Monitoring by Member States, residential trajectory assessment by Commission within NBRP cycle

Public buildings

- Dealt with under Energy Efficiency Directive
- Renovation annually of 3% of total floor area of buildings owned by public bodies to at least NZEB or ZEB levels





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Planning for the 2050 vision and H&C decarbonisation

The 2050 vision for the
building stock

Provisions to decarbonise
heating & cooling

National Building
Renovation Plans





The 2050 vision for the building stock and H&C decarbonisation measures

Vision, objectives, targets

- Zero Emission Building stock by **2050**
- Complete phase out of fossil fuel boilers by **2040**
- At least 49% renewables in EU final energy consumption in buildings in **2030** (reference to REDIII, indicative)

Member States are encouraged to set national requirements to phase-out fossil fuel boilers

- Legal basis to set requirements on heat generators or minimum part of renewables used for H&C
- Member States shall strive to replace stand-alone boilers powered by fossil fuels in existing buildings

EPBD incentivises use of renewables in some categories of existing buildings

- Solar mandate for existing public and non-residential buildings

Redirection of financing streams away from fossil fuel-based equipment

- Bans subsidies for the installation of stand-alone boilers powered by fossil fuels (**as of 01/01/2025**)
- Incentives to encourage switch to solar / non-fossil-fuel based systems



National Building Renovation Plans

Building on long-term renovation strategies

More holistic tool at the centre of strategic action for the building stock

- Integrated planning, reporting and assessment instrument to reach ZEB stock by 2050
- Stronger social focus (indicators on energy poverty, skills)
- Strong transparency dimension (public consultation, link with Building Stock Observatory)

An improved and more detailed content

- More details on existing requirements and new requirements
- Use of EU-wide template (mandatory and optional indicators)

A timeline intended to align with National Energy & Climate Plans (NECPs)

- Derogation for the first NBRP

draft by 31/12/2025, COM assessment by 30/06/2026, final NBRP by 31/12/2026

- Then alignment/integration with NECP

draft plans by 01/01/2028, COM assessment by 30/06/2028, final plans by 01/01/2029



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**A stronger enabling framework
(information, advisory, and financial support)**





A stronger enabling framework: information, advisory, and financial support

Energy Performance Certificates

Renovation Passports

One-stop-shops

Financial support



Improved Energy Performance Certificates

An increasingly common approach to EPC scales, with some national flexibility retained

- Recalibration of EPC classes from 'A' to 'G' only
- “Appropriate distribution of energy performance indicators” among 'B' to 'F'
- To be commonly used: 'G' = very worst performing buildings at national level, 'A' = ZEB
- Updated scale to apply as of **24 months after entry into force of EPBD (possible derogation until 31/12/2029)**





Improved Energy Performance Certificates

More complete, informative, and useful EPCs

- Energy performance to be expressed in numeric indicators of both primary and final energy use
- Common EPC template to be used **as of 24 months after entry into force**
- Widened scope of EPC recommendations
- Strengthened provisions linked to quality control of EPCs (validity and availability)

Improvements are unfortunately restricted to a small number of EPCs

- Trigger points for issuing EPCs increased (major renovation + renewal of rental contracts)
- EPC lifespan remains 10 years → EPCs issued according to two scales will co-exists until around 2036
- By default, EPCs are issued through on-site visit but it can be carried *“by virtual means with visual checks”*
- Improvements to EPC content will materialise for small number of EPC and very gradually





Renovation Passports

An EU framework to supervise and facilitate uptake

Definition for Renovation Passport

- *“Tailored roadmap for the deep renovation of a specific building in a maximum number of steps that will significantly improve its energy performance”*
- Outlines how, in a few steps, an existing building should be renovated into ZEB

Common EU framework for Renovation Passport

- Mandatory national schemes to be introduced by **24 months after entry into force** of Directive
- But voluntary use by building owner

Quality principles ensured

- Social fairness: Member States shall ensure Renovation Passports are affordable and shall consider providing support to vulnerable households
- Coordination with other tools (especially EPC)
- Balance between forward looking (digital) approach and safeguards (on-site visit by qualified or certified expert)



One-Stop-Shops (OSS)

More recognition, better integration, and stronger role

Who is responsible for setting up OSS?

- Member States, with private stakeholder allowed to be involved
- Commission to provide guidelines with the objective of “*creating harmonised approach*”

How are OSS rolled out and to whom are they addressed?

- Minimum 1 OSS per region and per 80,000 inhabitants
- For 1) public actors, 2) homeowners/households (particular focus on people affected by energy poverty), 3) private entities (financial and economic organisations, including SMEs)

What services should OSS provide?

- Streamlined information, independent advice, holistic support
- Technical and financial solutions at all stages of renovation projects (focus on worst-performing buildings)
- Optional goals: accompany “district renovation programmes” + promote education and training

What role should OSS play within the renovation ecosystem?

- More prominence within EPBD (separate article) + support delivery of other provisions (MEPS)
- Links between OSS and EPCs & Renovation Passports to boost use of OSS



Financial support

A more strategic role for a diverse financial framework

- Investing for the ZEB stock by 2050
- Member States to use NBRPs as investment strategies
- Member States to promote diverse set of financing instruments (mortgage portfolio standards, pay-as-you-save schemes, on-bill schemes, reduced tax rates, etc.)
- Commission report (**by 31/03/2025**) on effectiveness and appropriateness of financing instruments

'Higher impact, higher support': a quality principle undermined by alternatives

- Re-direction of financing streams away from fossil fuels in H&C
- Member States shall incentivise (staged-) deep renovation with higher support
- But also *“sizeable programmes [high number of buildings with] at least 30% reduction primary energy use”*

Financing to support the renovation ecosystem, with social considerations

- Promote education & training, ensure affordability of EPCs & Renovation Passports, address upfront costs
- Target as priority vulnerable households, people affected by energy poverty, social housing
- Introduce safeguards (e.g., caps on rent increase, rent support)



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SOCIAL FAIRNESS IN THE EPBD

A cross-cutting consideration

More recognition for energy poverty

- Official legal definitions (energy poverty, vulnerable households)

Strong emphasis on renovation of worst-performing buildings

- 55% of savings in residential trajectory to come from 43% worst performing residential buildings

Ensuring affordability of information, advisory services and financial support

- Affordability of EPCs/Renovation Passports and specific support to vulnerable households
- Mandatory support framework for MEPS focus on vulnerable households, energy poverty, social housing
- Penalties to consider financial situation of homeowners

Social safeguards

- Member States to provide particular protection for tenants
- Member States to monitor social impacts of building decarbonisation policies (MEPS but also indicators on energy poverty and skills in NBRPs)

THE RECAST EPBD - concluding remarks

The road from Brussels to capitals...



Building stock currently off track
to achieve climate neutrality by 2050



Recast EPBD can contribute closing the
decarbonisation gap in a socially fair way



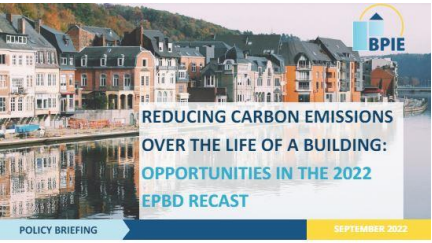
But we need to start with transposition /
implementation to get results



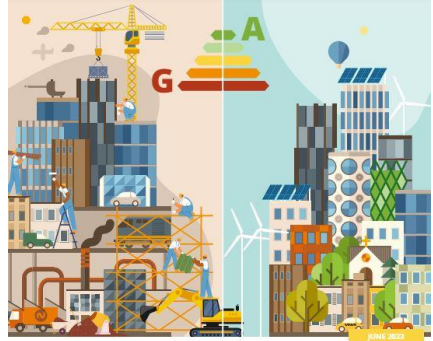


BPIE's WORK

Let's connect for further collaboration!



The current Commission proposal does not go far enough in addressing operational and embodied carbon emissions on building lifecycle: global warming potential (lifecycle-GWP), often referred to as Whole Life Carbon (WLC). Deploying WLC measures in the EU Energy Performance of Buildings Directive (EPBD) recast will be a win-win for energy performance and climate action at the building and industry level. Therefore, a stepwise approach and a clear timeline that go beyond 2030 needs to be set out in the EPBD recast.



MINIMUM STANDARDS MAXIMUM IMPACT

HOW TO DESIGN FAIR AND EFFECTIVE
MINIMUM ENERGY PERFORMANCE STANDARDS
FOR BUILDINGS IN EUROPE



EU BUILDINGS CLIMATE TRACKER 2nd EDITION A CALL FOR FASTER AND BOLDER ACTION



THE EPBD DECRYPTED A TREASURE CHEST OF OPPORTUNITIES TO ACCELERATE BUILDING DECARBONISATION

Quantitative analysis, policy assessment, design and recommendations...





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