Delivering on the European
Green Deal and Fit for 55

EU perspective:
Proposal for the EPBD with a focus on LCA

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September 2022 – Nordic Climate Forum for Construction

European Green Deal

Roadmap for Europe becoming a **climate-neutral continent by 2050**

Increased climate ambition with **buildings and their renovation** as a key focus:

- High consumers of energy in Europe, using up 40% of energy consumed
- Very slow rate of renovation, exposing citizens to spikes in energy prices and to volatility
- At the same time, many citizens struggle to keep their homes warm
- Building renovation creates jobs, reduces green-house gas emission and improves quality of lives

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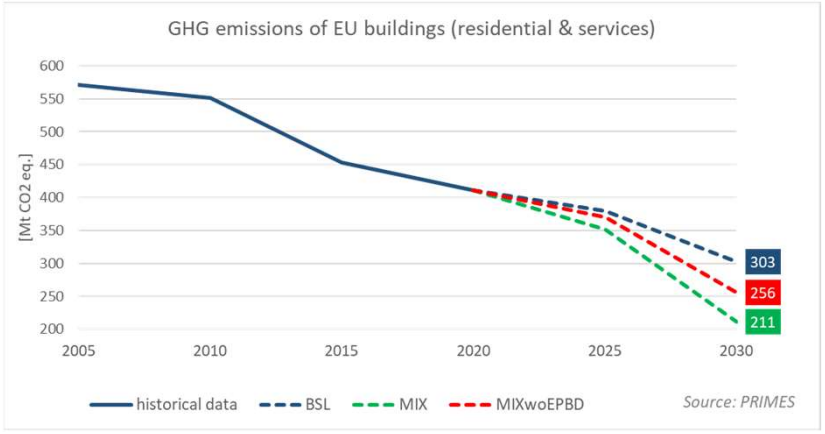
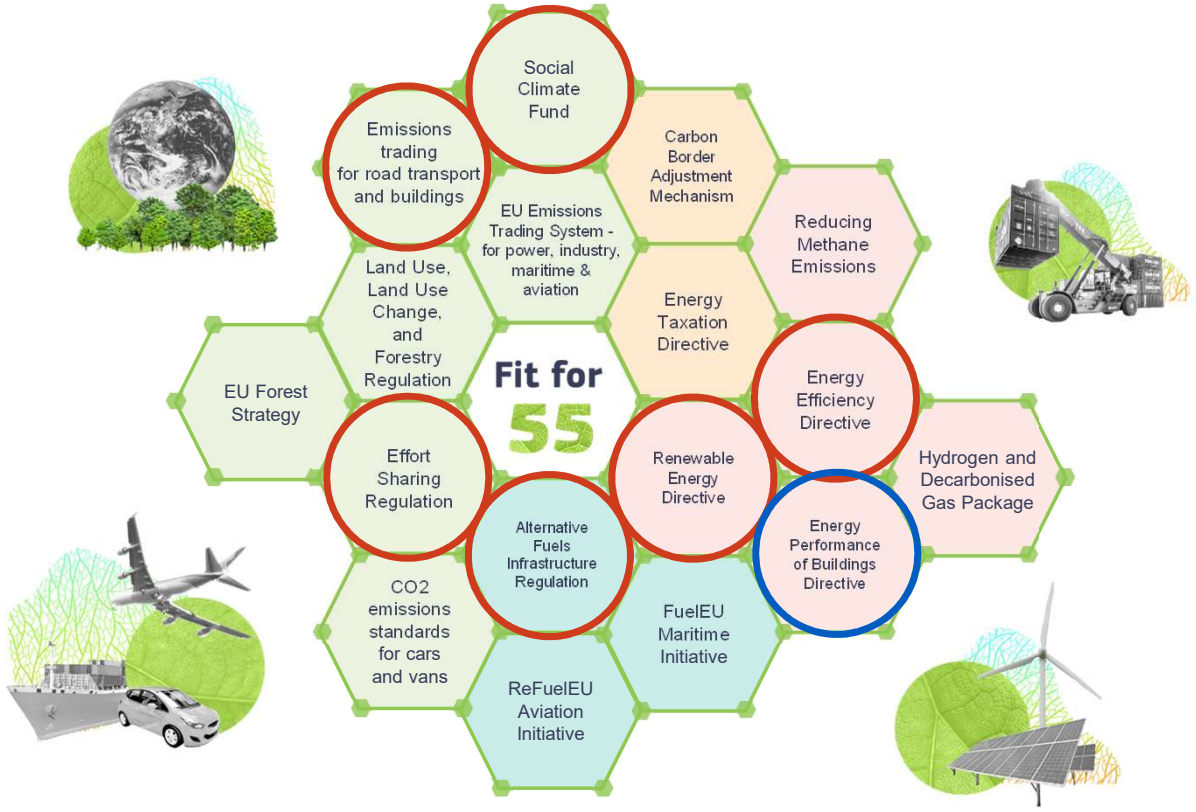
“Fit for 55”: buildings’ key role

MAKING OUR HOMES AND BUILDINGS FIT FOR A GREENER FUTURE

- decrease emissions
- save energy
- tackle energy poverty
- improve quality of life
- generate jobs and growth





https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541

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The Renovation Wave strategy and action plan

Objective:

Doubling renovations by 2030 and foster deep renovations

Decarbonisation of heating and cooling

Tackling energy poverty and **worst-performing buildings**

Life-cycle thinking and **circularity**.
Boosting **know-how** and **workers' skills** in the renovation sector

A set of policy measures, **funding tools** and **technical assistance instruments** to break down of existing barriers throughout the renovation chain – from the conception of a project to its funding and completion

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REPowerEU Plan - to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition

REPowerEU is a plan for

- saving energy
- producing clean energy
- diversifying energy supplies

It is backed by financial and legal measures to build the new energy infrastructure and system that Europe needs.

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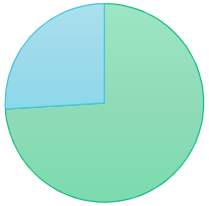
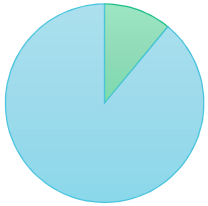
EU building stock

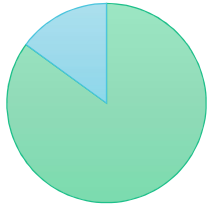
24 billion m2 floor area, around **74 % residential**



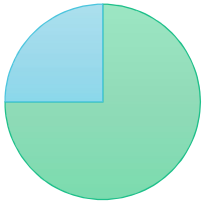
Around **186 million** residential units are **permanently inhabited**

Only **11 %** of existing buildings undergo some level of **renovation** each year; weighted annual energy renovation rate only at **1 %**

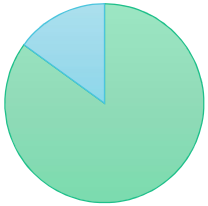




85 % of existing EU dwellings were **built before 2000** ...



... **75 %** have **poor energy performance** ...



... more than **85 %** will still be in place in **2050**

The building sector is one of the **largest energy consumers** in Europe, responsible for more than one third of the EU's energy-related emissions

Recast of the Energy Performance of Buildings Directive

- **Part of the Fit for 55** / Delivering the Green Deal package.

  Links with other initiatives, including EED, ETS, RED2

+ in **REPowerEU,** call on co-legislators to make the "Fit for 55" package more ambitious and speed up its adoption and implementation

- **EPBD proposal adopted on 15 December 2021** - COM(2021) 802 final – together with the updated analysis of Long Term Renovation Strategies (SWD(2021) 365 final/2)
- **Discussions in Council and Parliament**

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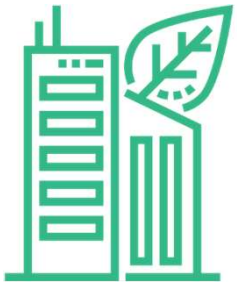
Objectives

Long term vision for buildings' contribution to 2050 targets

Contribute to **reducing GHG emissions** & **final energy consumption** by 2030

Climate target plan

- by 2030 the EU should reduce **buildings' GHG emissions by 60%,** their **final energy consumption by 14%** and **energy consumption for heating and cooling by 18%.**



Renovation wave

- aims at **doubling renovations by 2030** and foster **deep renovations**

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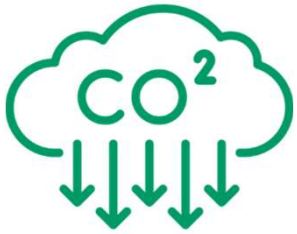
Focus areas



Renovation	Decarbonisation	Modernisation & system integration	Financing
• National Building Renovation Plans • Minimum Energy Performance Standards • Energy Performance Certificates • Renovation passports for individual buildings	• Zero-emission buildings as new standard for new buildings and 2050 vision for building stock • **Consideration of whole life cycle carbon** • Phasing out of incentives for fossil fuels and new legal basis for national bans	• Infrastructure for sustainable mobility • EPC digitalisation & databases • Smart Readiness Indicator	• Public and private financing & technical assistance • Deep renovation standard • Priority to vulnerable households and people affected by energy poverty

A new vision with zero-emission buildings

Definition - *Article 2(2):*

'zero-emission building' means a building with a **very high energy performance**, as determined in accordance with Annex I, where the very low amount of energy still required is **fully covered by energy from renewable sources** generated on-site, from a renewable energy community within the meaning of Directive (EU) 2018/2001 [amended RED] or from a district heating and cooling system, in accordance with the requirements set out in Annex III;

- Standard for new buildings as of 2030 / 2027 for public buildings - Article 7
- Vision for 2050 building stock: EPBD objective - Article 1(1); long-term objective of building renovation plans – Art 3(1) & of renovation passports – Art 10(3)(b)
- Level to be attained by deep renovations as of 2030 - Article 2(19)
- Possibility of recourse to other grid energy if otherwise not technically feasible
- Annex III: maximum thresholds for energy performance of new ZEBs
- Strengthened requirements for recharging of e-vehicles, and mandatory bicycle parking in new buildings

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Whole life-cycle carbon & Carbon removal

- First steps towards addressing carbon emissions over the whole life-cycle of a building
- National building renovation plans must include **policies on reduction of whole life-cycle greenhouse gas emissions** in buildings & **the uptake of carbon removal** - Annex II, point c, left column, point h
- Mandatory **calculation of life-cycle global warming potential** for new buildings as of 2030 and new large buildings as of 2027 - Article 7(2), Annex III section II
- EPCs: yes/no indication and calculated value of GWP = voluntary elements Annex V, point 2 (c), (d) + information on carbon removals associated to the temporary storage of carbon in or on buildings

Calculation of life-cycle GWP of new buildings

- ‘For the calculation of the life-cycle global warming potential (GWP) of new buildings pursuant to Article 7(2), the GWP is communicated as a **numeric indicator for each life-cycle stage** expressed as kgCO2e/m2 (of useful floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations shall be carried out in accordance with **EN 15978** (EN 15978:2011. Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method).
- The scope of building elements and technical equipment is as defined in the **Level(s) common EU framework for indicator 1.2**. Where a national calculation tool exists, or is required for making disclosures or for obtaining building permits, that tool may be used to provide the required disclosure.
- Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework. **Data regarding specific construction products** calculated in accordance with [revised **Construction Products Regulation**] shall be used when available.’

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Main provisions on existing buildings

Minimum Energy Performance Standards:

- Union-wide MEPS to phase out worst-performing buildings
  - Public and other non-residential buildings: at least EPC class F by 2027 & EPC class E by 2030
  - Residential buildings: at least EPC class F by 2030 & EPC class E by 2033
- MS to set up timelines for further improvement of their building stock in their building renovation plans
- Supporting framework with a focus on vulnerable households and monitoring of social impact

National Building Renovation Plans (replacing the long-term renovation strategies)

- BRP to be integrated into the NECP process, except the first plan
- Common template with only national goals and key mandatory indicator, several elements opening to other dimensions beyond energy remain voluntary (accessibility, safety,..)

Definition of 'deep renovation'

Strengthened requirements for recharging of e-vehicles in case of major renovation

Stronger provisions on the removal of obstacles and barriers to renovation (right to renovate)

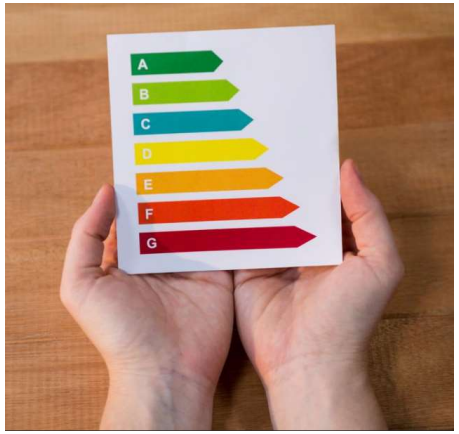
Member States must not subsidise fossil-fuel boilers as of 2027.

Main provisions on information tools

GHG part of the metrics of the EPBD

Energy Performance Certificates (EPC)

- by 2025 all energy performance certificates must be based on a harmonised scale of energy performance classes (from A to G, with A = ZEB and G = 15% worst buildings)
- Common template with energy and GHG indicators, while other indicators remain voluntary
- The validity of energy performance certificates of the lower D to G classes is reduced to five years
- Improved quality assurance



Smart Readiness Indicator (SRI) required for large non-residential buildings as of 2026

New provisions to ensure access to buildings data, databases of EPCs and data interoperability

Methodology for calculating the energy performance of buildings updated to clarify the possible use of metered energy and the cost-optimal methodology specifies how to take into account carbon prices

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Useful links

https://ec.europa.eu/energy/sites/default/files/proposal-recast-energy-performance-buildings-directive.pdf

https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6683

https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en

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Thank you