







New Challenges for Europe's Cohesion

1. The policy framework: EU policies to make EU buildings greener and more energy efficient: the Energy Performance of Buildings Directive

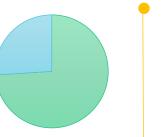






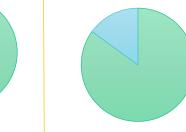
EU building stock

24 billion m2 floor area, around 28 % non-residential



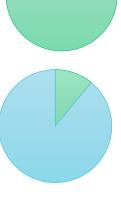
85 % of existing EU dwellings were **built before 2000**, of which ...

... **75** % has poor energy performance ...



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

Only 11 % of existing buildings undergo some level of **renovation** each year





European Green Deal

- ✓ Increased climate ambition with **buildings and their renovation** as a key focus:
 - ➤ Big energy consumers -40% of energy consumed
 - Very slow rate of renovation, exposing citizens and businesses 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





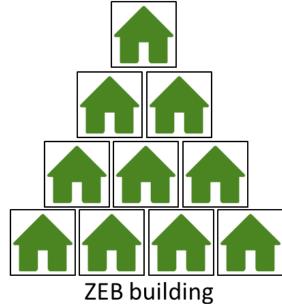
A zero emission building stock by 2050

EU avg 2019: 22% of renewables H&C 34% renewable electricity*



G class building

Powered by renewables zero direct CO2 emissions









The Renovation Wave strategy and action plan



Decarbonisation of heating and cooling



Tackling energy poverty and worst-performing buildings



Renovation of public buildings and social infrastructure such as schools, hospitals and administrative buildings

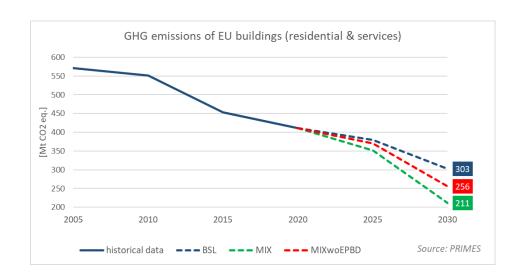


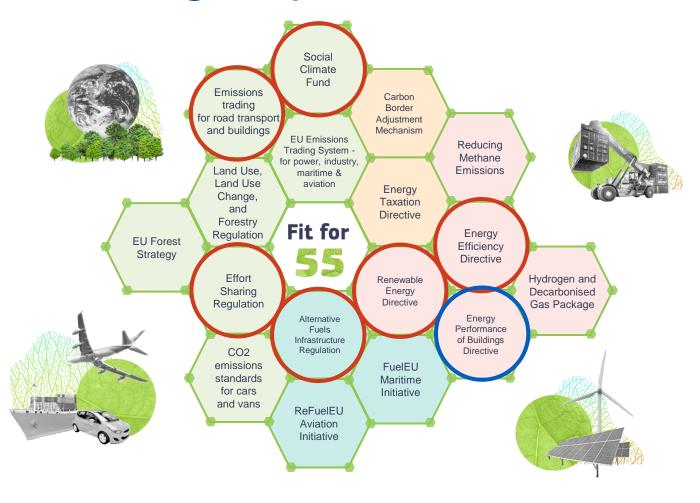
A set of policy measures, funding tools and technical assistance instruments to break down of existing barriers throughout the renovation chain – from the conception of a project to its funding and completion

"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







The revision of the Energy Performance of Buildings Directive

- **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



Twofold objective:

→ Contribute to reducing buildings' GHG emissions and final energy consumption by 2030

→ Provide a long-term vision for buildings and ensure an adequate contribution to achieving **climate neutrality in 2050**



Focus areas of the EPBD revision

Renovation

- Minimum Energy Performance Standards
- Energy Performance Certificates
- National Building Renovation Plans and renovation passports for individual buildings

Decarbonisation

- Introduction of zero-emission buildings as new standard for new buildings
- Consideration of whole life cycle carbon
- Phasing out incentives for fossil fuels and new legal basis for national bans

Financing

- Sustainable finance and energy poverty alleviation
- Deep renovation standard
- Renovation passports for individual buildings

Modernisation & system integration

- Infrastructure for sustainable mobility
- Smart Readiness Indicator
- Indoor air quality: ventilation and other technical building systems





New Challenges for Europe's Cohesion

2. The EU funding landscape: opportunities to finance the greening of buildings, also in the sport sector





Finance for energy efficiency

EU-funding landscape

- Direct investments: Recovery and Resilience Facility (EEF), Cohesion Policy Funds (ERDF/CF), Just Transition Fund (JTF), ETS Revenues, Modernisation Fund.
- Leverage private capitals, project development assistance and advisory: InvestEU, ELENA Facility, Technical Support Instrument (TSI).
- Market uptake, policy enhancement activities, technological development, research and innovation: Horizon Europe, Built4People Partnership, LIFE Clean Energy Transition, Innovation Fund.

Built4People Partnership

- Co-programmed partnership under Horizon Europe
- R&I Agenda for a People Centric
 & Sustainable Built Environment
- Challenges:
 - Improve energy efficiency in buildings and in the construction sector;
 - Decarbonisation: Deployment of RES at the Buildings/District level.

 Built4People

- Resource Efficient and circular economy: Foster circularity in construction. Use greener construction materials/more sustainable building techniques.
- Empower citizens and promote their engagement towards sustainability.

Horizon Europe - Work Programme 2023-2024

4 Calls – 2 per year

17 topics – 10 topics of Built4People and 7 on Energy Efficiency

Total Funding around 170 million

Strong influence of REPowerEU as a political priority

• 1 flagship topic: Innovative solutions for cost-effective decarbonisation of buildings through energy efficiency



LIFE CET – Call 2022 Funding topics

Citizens in the clean energy transition

- Addressing Building related interventions in vulnerable districts (LIFE-2022-CET-ENERPOV)
- Developing support mechanisms for energy communities (LIFE-2022-CET-ENERCOM)

Decarbonisation of buildings and H&C

- Towards a zero-emission building stock: deep renovation (LIFE-2022-CET-DEEPRENO)
- Energy performance & Smart Readiness of buildings (LIFE-2022-CET-BUILDPERFORM)
- Deployment and affordability of heat pumps (LIFE-2022-CET-HEATPUMPS)
- Low-grade renewable energy or waste heat in high temperature DH (LIFE-2022-CET-DH)

Building skills and capacity of industry and the service sector

- BUILD UP Skills –
 Strategies and training interventions enabling a decarbonised building stock (LIFE-2022-CET-BUILDSKILLS)
- Supporting the clean energy transition of the business sector (LIFE-2022-CET-BUSINESS)



Main provisions on new buildings

From Nearly zero energy to zero emission buildings

- Update based on benchmarks per climatic zones, to be applied by 2030 (2027 for public buildings)
- Stronger incentive to on-site renewables, efficient district heating and energy communities
- Zero-emission buildings become the level to be attained by a deep renovation as of 2030 and the vision for the building stock in 2050

The life-cycle Global Warming Potential (GWP) of new buildings will have to be calculated as of 2030 in accordance with the Level(s) framework, informing on whole life-cycle carbon emissions (2027 for large buildings)

Strengthened requirements for recharging of e-vehicles, and mandatory bicycle parking in new buildings





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 become 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

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

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

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





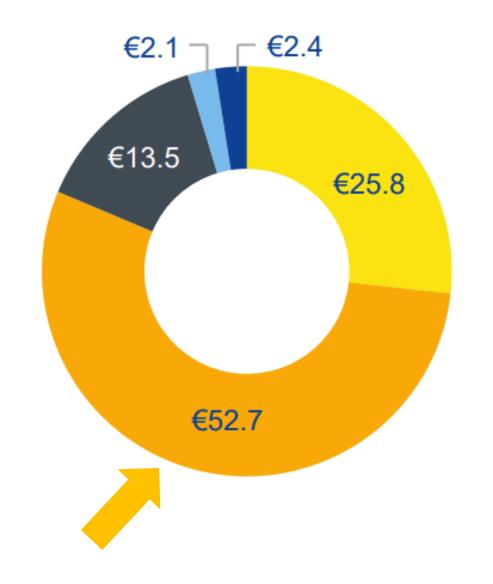
Horizon Europe

- Key Funding Programme for R&I
- Period 2021-2027
- Main Priorities
 - Tackle Climate Change;
 - Help achieve UN's Sustainable Goals;
 - Boost Competitiveness and Growth in the EU.
- Financed by the Multi-Financial Framework
 - Total Financing for 2021-2027: almost €100 billion.





Horizon Europe – Budget 21-27



€ billion In current prices

- Excellent Science
- Global Challenges & European Ind. Comp.
- Innovative Europe
- Widening Part. & ERA
- Euratom

This envelope includes € 3.5 billion under the InvestEu Fund



Horizon Europe – Cluster 5 / Destination 4





Horizon Europe Calls 2021

- Two Calls
 - 11 projects selected in total
 - 6 should start in the coming months
 - 5 on grant agreements preparation
 - Total financing of almost 70 million
- Covered matters in the projects
 - Assessment of Energy Performance
 - Industrialisation of renovation and pre-fabrication
 - Solutions for Building Stock Monitoring
 - Specific action for the Support of the B4P partnership





Horizon Europe Calls 2022

- Two Calls8 topicsTotal Funding of 122 million
- First call open until September 6
 - Resource efficient solutions for a low-emission cultural-heritage;
 - Digitalisation: smart-grid and smart-network ready buildings
 - Solutions for more sustainable materials





LIFE Clean Energy Transition - Call 2022

- Deadline 16 November 2022
- EUR 98m available for grants



- 18 policy-driven, prescriptive funding topics with detailed guidance
- Most topics: Minimum of 3 (eligible) entities from 3 different eligible countries (average number of partners is higher)
- 95% co-funding rate (no infrastructure cost, mostly labour)
- Apply electronically via the EC's <u>Funding & Tender opportunities portal</u>



