

Heating & Cooling Strategy – Call for feedback

Decarbonising Heating and Cooling in Buildings

Achieving the 2030 climate and energy targets will require a profound transformation of the energy mix used for heating and cooling in buildings. This transition depends on two complementary strategies: improving energy efficiency to lower energy demand and accelerating electrification to reduce dependence on fossil fuels.¹

Buildings are the single largest energy consumer in the EU, representing 40 % of total EU final energy. 80% of this energy is used for heating, cooling and hot water.²

Continued efforts to enhance energy efficiency will be crucial to achieving a net-zero economy and unlocking the full benefits of the energy transition. Compared with 2022, overall heat demand should be reduced by 23% in 2030 and by 47% in 2050, according to recent European Commission decarbonisation scenarios.³ Over two-thirds of the total heat demand reduction would come from the building sector, with reductions in the order of 39% by 2030 and around 53% by 2050, compared to 2022.

Around 75% of our heating and cooling needs are supplied from fossil fuel sources.⁴ In 2022, the European Union imported 62.5% of the energy it consumed – the highest level of dependency since at least 1990⁵, negatively affecting our trade balance. EU energy imports averaged €600bn during the energy price crisis.⁶ By prioritising efficient buildings, the EU can lessen its vulnerability to price fluctuations and supply disruptions, strengthening its energy security.

The buildings sector is also a **key contributor** to greenhouse gas (GHG) emissions in the EU, representing 34% of energy-related emissions in 2022.⁷ Since 2015, CO₂ emissions from building energy use have declined by only **14.7 %**, falling well short of the **27.9 %** reduction trajectory expected to stay on track toward 2030 goals.⁸

A renewed focus on buildings' efficiency and electrification will enable the EU to achieve its climate goals in a cost-efficient manner.

Multiple interlinked obstacles

Energy efficiency and electrification products and equipment for buildings are already available, and the sector is already a large contributor to the economy:

¹ Renewables, electrification and flexibility - For a competitive EU energy system transformation by 2030 | Publications | European Environment Agency (EEA)

² Energy Performance of Buildings Directive

³ Impact assessment report accompanying 'Securing out future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society', No SWD(2024) 63 final, European Commission

⁴ Renewable energy for heating & cooling up to 25% in 2022 - Eurostat (europa.eu)

⁵ Germany, EU remain heavily dependent on imported fossil fuels | Clean Energy Wire

⁶ The euro in the field of energy (europa.eu)

⁷ European Environment Agency

⁸ EU Buildings Climate Tracker 3rd edition < BPIE - Buildings Performance Institute Europe, 2024

- It provides direct local jobs for 1.2m Europeans⁹ and more than 6.5m¹⁰ when including the broader building renovation supply chain. Investments in building renovations can create up to 30 jobs per million euros¹¹
- This industry runs more than 600 manufacturing sites in the EU^{12 13}
- Its turnover is estimated at around €150bn per year.¹⁴

However, several barriers are currently preventing the sector from scaling up:

- **Capital cost and financing gaps:** Upfront investment and access to affordable private finance remain a core challenge for decarbonisation and renovations in buildings.
- **Workforce and supply chain bottlenecks:** A shortage of skilled installers and fragmented markets slow deployment.
- **Regulatory and market misalignment:** In many Member States, tariffs, taxation, and incentives still favour fossil heating. Policy uncertainty, overly complex permitting, and lack of integrated planning (at municipal or regional heating/cooling levels) further impede progress.
- **Rising cooling demand:** As climate change intensifies, cooling demand is growing rapidly—some projections expect a **72 % increase** by 2030 in certain climates if unmanaged.¹⁵
- **Technology and infrastructure constraints**
 - Worst-performing buildings in the EU are ill-suited to direct electrification without prior envelope improvements. Combining thermal comfort improvements with decarbonised heating systems ensures the optimal sizing of technical building systems and lower operational costs.
 - In districts, decarbonising district heating networks (e.g. switching to geothermal, waste heat, or deep electrification) demands long development lead times and regulatory clarity.

These challenges interact and call for an integrated approach aligning decarbonisation, renovation, efficiency, health and urban planning policies.

Our recommendations

Facilitate the implementation of the Energy Performance of Buildings Directive and the Energy Efficiency Directive.

- ➔ Align NBRPs, Heating and Cooling Plans, and Minimum Energy Performance Standards. Ensure coordination with spatial planning, permitting, and grid infrastructure policies.
- ➔ Provide guidance on national building decarbonisation/energy renovation support programs. The latter must provide long-term predictability to all stakeholders, bring worst-performing buildings to 'at least' low temperature readiness and systematically encompass climate resilience measures.
- ➔ Help Member States address lasting barriers to energy renovations in condominiums (split incentives, decision-making rules...)
- ➔ Support district renovations
 - Mandate the simplification of permitting for renovation projects
 - Provide dedicated funding for district approaches through the upcoming Competitiveness Fund

⁹ IEA, 2025

¹⁰ Navigant, 2019

¹¹ IEA, 2020

¹² Jacob Winskell, Global Insulation, 2023, [European Insulation in 2024](#)

¹³ [Map of heat pump factories – European Heat Pump Association](#)

¹⁴ EU ASE, 2024, compilation of market studies

¹⁵ IRENA, [Cities and buildings](#)

- Support One Stop Shops to aggregate demand and help them establish links with private finance institutions through the Energy Efficiency Financing Coalition national hubs

Mandate the phase-out of fossil fuels in buildings by 2035.

- ➔ Progressively extend the EPBD's fossil fuel subsidies phase-out to all fossil appliances.
- ➔ Adopt a ban on the sale of fossil fuel appliances starting in 2035.

Improve the business case for energy efficiency measures and decarbonisation

- ➔ Rebalance energy taxation to favour energy efficiency and electrification, while supporting energy-intensive industries in their transition. Support the revision of the Energy Taxation Directive.
- ➔ Support the ETS2 implementation + mandate the use of ETS2 revenues beyond the Social Climate Fund to address the buildings and transport sectors.
- ➔ Review the VAT Directive so that the minimum rate for energy efficiency products and equipment is lowered to zero, including for renovation works.

Capitalise on digitalisation to develop a more flexible, secure and integrated energy system that encompasses heating, electricity and mobility networks.

- ➔ Mandate the use of BIM in Public Procurement
- ➔ Support Member States and municipalities to map their building stocks and develop national databases.

Facilitate consumers' access to real-time energy and water consumption data and encourage their active engagement and data-driven optimisation of energy flows in buildings.

- ➔ Support the implementation of the Electricity Directive.
- ➔ Mandate the installation of interoperable smart meters in all Member States by 2030.¹⁶

Undertake a comprehensive mapping of climate risks to guide climate adaptation and resilience strategies based on identified vulnerabilities of the built environment across regions. Such an evidence-based approach is essential to future-proof building designs and renovations.

- ➔ Better integrate cooling needs in energy system forecasts.
- ➔ Support active and passive cooling solutions, using district approaches when possible.

¹⁶ As of 2022, only thirteen Member States had reached a smart meter rollout rate of at least 80%.
acer.europa.eu/sites/default/files/documents/Publications/ACER_MMR_2023_Barriers_to_demand_response.pdf

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About Efficient Buildings Europe

Efficient Buildings Europe represents Europe's leading companies involved with the manufacture, distribution and installation of energy efficient products, equipment, and services for buildings. The members of Efficient Buildings Europe employ more than 280,000 people in these activities in Europe and have over 1,200 production facilities and office locations in the EU. The mission of Efficient Buildings Europe is to work together with the EU institutions to help the EU to move towards a more efficient use of energy in buildings, thereby creating an efficient, decarbonised, and flexible building stock that actively contributes to the achievement of Europe's commitments on climate change, energy security, and economic growth.

Efficient Buildings Europe Members (2025)

