

The following fact sheet is provided by the EEF for a better understanding of the topic to be discussed.
The information is non-exhaustive and serves as background information.

Energy Performance of Buildings: a comprehensive approach to buildings' decarbonization

Energy Debate - 13 September 2022

The co-hosts – EEF Associate Members



The **Union of the French Electricity Industry (Union Française de l'Electricité)** is the trade association representing the employers of the sector within the branch of the electricity and gas industries. It represents the whole French electricity industry from generators to system operators, local energy companies, suppliers of electricity and energy efficiency services.



Finnish Energy (Energiateollisuus) represents 270 companies in electricity, district heating and gas sectors. Finnish Energy aims to make Finland climate neutral by promoting ambitious, market based and technology neutral policies.



SHV Energy is a leading global distributor of off-grid energy such as LPG, LNG and bioLPG and also increasingly investing in other renewable solutions, such as renewable DME (rDME) and distributed solar. Part of a family-owned multinational consisting of a group of specialized energy companies (among which Primagaz in France) whose mission is to provide decentralized, low-carbon clean energy solutions to 30 million business and residential customers off the grid.

Background information

EU buildings:

- account for 40% of EU energy consumption &
- 36% of EU energy related GHG emissions
- 75% of buildings is energy inefficient
- 35% is more than 50 years old
- 85-95% will still be standing in 2050
- only 1% is renovated each year
- around 40 million homes are not connected to the gas grid

Energy Performance of Buildings Directive (EPBD)

The EPBD was first adopted in 2002. It was repealed by the EPBD of 2010, last amended in 2018.

In the framework of the **Fit for 55 Package**, in December 2021 the Commission proposed an **EPBD recast** to:

- achieve a zero-emission and fully decarbonized building stock by 2050
- increase the renovation rate, particularly for the worst-performing buildings in each Member State
- support better air quality, the digitalisation of energy systems for buildings and the roll-out of infrastructure for sustainable mobility
- facilitate more targeted financing to investments in the building sector

As part of the **REPowerEU**, in May 2022 the EC proposed an additional **amendment to the EPBD**:

- introduction of gradual targets for the deployment of solar energy installations on buildings

Specific provisions particularly relevant to today's discussion

Art. 2 defines, among others:

- **zero-emission building:** 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
- **nearly zero-energy building:** a building with a very high energy performance, as determined in accordance with Annex I, which cannot be lower than the 2023 cost-optimal level reported by Member States in accordance with Article 6(2) and where the nearly zero or very low amount of energy required is covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby
- **operational greenhouse gas emissions:** GHG emissions associated with energy consumption of the technical building systems during use and operation of the building

Art. 16.4 introduces the **mandatory indication of operational GHG emissions in the energy performance certificate** by 31 December 2025.

Art. 15 & art. 11: no financial incentives should be given for the installation of fossil fuels powered boilers as of 2027 (art.15) and a legal basis for national bans of such boilers is introduced (art. 11).

The co-hosts' points of view

French Union of Electricity

- Decarbonizing uses through the development of building's equipment based on low-carbon energy carriers is key. The reasoning behind the 'zero-emission buildings' definition would eliminate the most energy-intensive buildings but not necessarily the most energy-intensive and CO₂ consumers ones.
- Onsite RES with a dedicated network has consequences: non-optimization of RES development at power system level, SoS, costs, limitation of consumers' right to choose and switch energy supplier.
- Integrating CO₂ emissions as a performance indicator alongside an energy performance indicator would lead to a quicker phase-out of fossil energies.

Finnish Energy

- The 'zero-emission building' definition ignores the possibility of achieving carbon-neutral buildings with zero-emission district energy and electricity. Onsite and supplied energy should be equally treated.
- Categorical building-level requirements can lead to sub-optimal solutions and jeopardize sector integration. Zero-energy buildings are an unrealistic and suboptimal solution from the perspective of the energy system. Cost efficiency is the most relevant parameter to look at.
- Countries specificities must be considered. Too detailed legislation of methods trying to achieve common targets may lead to significant inefficiencies and additional costs.

SHV Energy

- A one-size-fits-all approach based on electrification fails to consider the diversity of the EU's building stock and the different needs of rural and off-gas-grid households, which are harder-to-electrify.
- Liquid gases and renewable liquid gases offers a great buildings' decarbonization potential in rural and off-gas-grid areas, which would be hindered by a ban on boilers. Whether a heating technology is carbon-free depends on the fuel type, not the type of boiler.
- The current definition of a "zero-emission building" is concerning: all renewables, whether produced on or off-site, should be able to contribute to zero-emissions buildings.