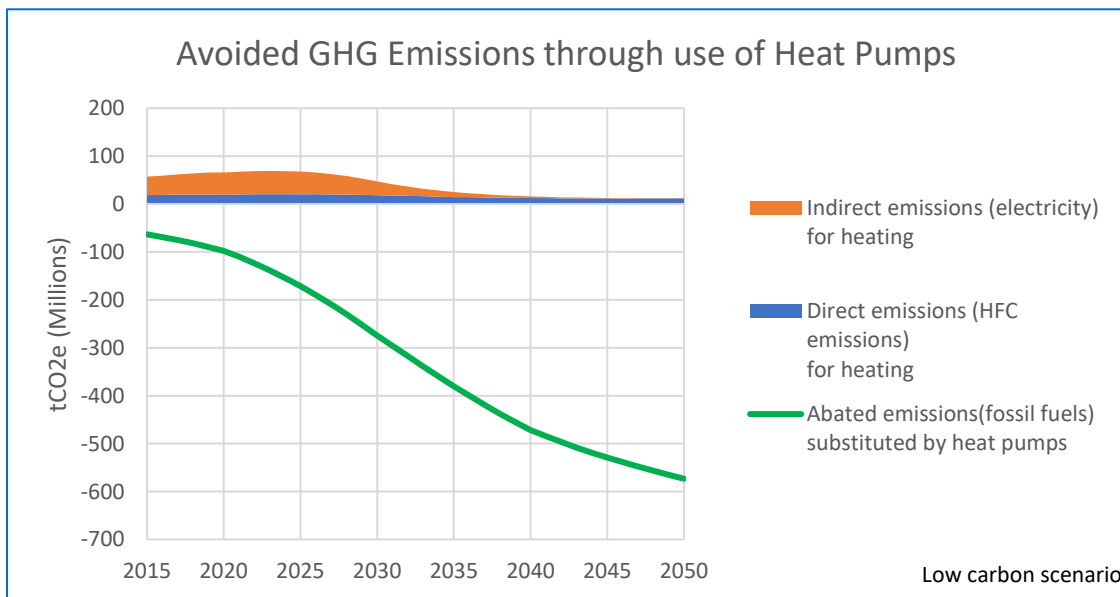


EPEE – Position on the proposal for a recast Energy Performance of Buildings Directive

EPEE – representing the Refrigeration, Air Conditioning and Heat Pump (RACHP) Industry in Europe - strongly welcomes the European Commission’s proposal for a recast Energy Performance of Buildings Directive (EPBD). The building sector merits to be at the centre of regulatory efforts for clean electrification through the integration of renewable energy and reductions in energy consumption.

Buildings are responsible for roughly 36% of greenhouse gas (GHG) emissions in the European Union, most of which originate from heating and cooling. Heating systems based on fossil fuels still dominate in the European building stock, with two thirds of heating demand currently covered by fossil-based technologies. Yet highly efficient zero-carbon heating and cooling technologies are available and scalable today and the RACHP sector is ready to provide the technologies needed.

In line with the EU’s 2030 and 2050 climate and energy targets, EPEE’s RACHP market model *HFC Outlook EU* projects a massive replacement of fossil fuel heating with electric heat pumps. The graph below shows that the emissions from energy consumption (in orange) and from refrigerants (in blue) will drastically reduce over time despite a rapidly growing market - thanks to already existing EU policies. The green line shows the abated emissions from replacing fossil fuel heating by heat pumps. These abated emissions could reach almost 600 million tonnes of CO₂ by 2050, more than 20% of current EU emissions, underlining the key role of our sector towards a climate neutral building stock.



In the following paper, EPEE would like to highlight several positive improvements to the EPBD, proposed by the European Commission. At the same time, our sector would like to stress further potentials for improvement on many of the priority elements below, which are outlined in detail in our amendment proposals.

1. Zero-emission buildings:

EPEE believes that the introduction of the Zero Emission Building (ZEB) concept is a vital step to decarbonising buildings. From 2030 it will be necessary for all new buildings and deep renovations to ensure that the very low amount of energy required to provide essential building functions, including heating, and cooling, is fully covered by renewables. EPEE supports the objective of the proposal to ensure local or community renewable energy is used wherever possible but notes with concern that **excluding renewable energy from the electricity grid could have a negative effect in increasing the costs of renovations**, with the consequence of dissuading building owners from undertaking renovations.

It is EPEE's understanding that the proposed ZEB definition would exclude the use of hydrogen-based boilers. EPEE fully agrees with this approach given that heat pumps and district heating and cooling are technologically mature and more cost-effective options. Avoiding a lock-in of gas assets and exacerbated energy poverty will be crucial in the coming years, given the already pertinent issue of the social effects of decarbonisation. In addition, electric heating, especially heat pumps, offer better energy efficiency performance than any gas technology, which means that less renewable energy input is required even when compared with green hydrogen.

Finally, EPEE welcomes that the introduction of ZEBs will further promote the deployment of renewable energy sources (RES) across the EU. From this perspective, EPEE considers that the rapid progress in the decarbonisation of power generation and end-use sectors needs to be reflected in a reduction in the default coefficient of the Primary Energy Factor (PEF) which is set in Annex IV of the Energy Efficiency Directive (EED). The Primary Energy Factor (PEF) converts final energy use into primary energy use, allowing comparison of the energy efficiency of technologies using different energy carriers. It is therefore crucial that the PEF is as close to reality as possible, reflecting the true composition of the electricity mix which is increasingly based on renewable energies. This is for example relevant when comparing the energy efficiency of heat pumps with that of gas condensing boilers in the framework of product Ecodesign and Energy Labelling.

2. Minimum energy performance standards:

EPEE strongly supports the introduction of minimum energy performance standards (MEPS) at the EU-level, for the worst performing sections of the building stock. Requiring Class E EPC as the minimum from 2030 will drastically accelerate the renovation of the existing building stock. Nevertheless, as energy renovations require long-term planning and predictability for market actors and citizens, EPEE would encourage any further improvements to the defined scope and timeframe of the proposed MEPS to ensure that the multiple benefits of ambitious energy renovations are achieved and carbon lock-in effects are avoided.

3. Calculation of energy performance and life-cycle GWP of buildings:

EPEE strongly supports the changes proposed by the Commission to the calculation methodology for the energy performance of buildings in Annex I. Especially the proposed harmonization of the calculation based on the (sub)hourly method which will **enable the setting of more specific and accurate performance requirements for technical building systems (TBS) which will ensure better consideration of the Energy Efficiency First principle and a better valorisation of innovation, as well as prohibiting additional national requirements that will fragment the market.** Furthermore, EPEE agrees with the changes proposed to induce harmonisation for information requirements, by requiring the use of Ecodesign data, where available. In this context, EPEE would encourage similar efforts to be undertaken to ensure more harmonized approach to the calculation of life-cycle Global Warming Potential (GWP). **It is important to ensure that there is a harmonised basis on which manufacturers of TBS will be required to report product life-cycle GWP.** The Life-cycle Assessment (LCA) and Product Environmental Footprint (PEF) methodologies that will be developed in the vertical product specific implementing legislation under the implementation of the Sustainable Products Initiative's (SPI) revision of the Ecodesign Directive should be used for this purpose. A fragmented national approach would seriously jeopardise the HVAC sector's capacity to deliver the needed products for the green transition in a cost-effective manner. For this reason, any risk of regulatory overlaps, cascading or double regulation should be strictly avoided.

4. Energy Performance Certificates:

Energy Performance Certificates (EPCs) are the main information tool provided by the EPBD. The Commission's proposal to include **recommendations for the reduction of operational greenhouse gas emissions on the EPC will ensure that this tool can be a true driver of building decarbonisation** as well as energy efficiency. In addition, the new common template provided in Annex V is a positive step towards harmonisation and comparability across EU Member States. However, EPEE notes that currently most EPCs do not cover Indoor Environmental Quality (IEQ). **In order not to compromise the health and wellbeing of building occupants, recommendations for cost-effective or cost-optimal upgrading of energy performance should also incorporate IEQ aspects.** Considering that thermal comfort, indoor air quality, adequate levels of natural lighting and acoustics are among the most important drivers and benefits of renovation, including these factors in the EPC can further drive renovation.

5. Fossil fuel phase-out

EPEE strongly supports the provisions in Article 15(10) to phase out incentives for the installation of boilers powered by fossil fuels. Heating systems based on fossil fuels still dominate in the European building stock, since about two thirds of heating demand is still covered by fossil-based technologies¹. Yet highly efficient zero-carbon heating and cooling technologies are available and scalable today, and **a ban on financial support for fossil-based**

¹ A Renovation Wave for Europe, European Commission, 2020

heating will further enable consumers to make the fuel switch to renewable-based heat pumps.

6. Healthy Indoor Environmental Quality (IEQ):

The WHO estimates that on average people spend 90% of their time indoors in residential and non-residential buildings. Poor indoor air quality (IAQ) is estimated to factor in the premature deaths of 120,000 Europeans every year at an annual cost of EUR 260 billion. The body of evidence on the aerosolised transmission of COVID-19 in indoor environments further underlines the importance of addressing the EU's IAQ problem. In consequence, EPEE would note that IAQ is perhaps the most significant of a wider set of indoor environmental quality (IEQ) parameters, on which improvements are necessary, including thermal comfort, lighting and acoustics.

EPEE welcomes several improvements in the Commission's proposal to help ensure a better indoor environmental quality (IEQ), for the health and comfort of building occupants and the resilience of future buildings. **Our sector particularly welcomes the requirement under Article 11 to install monitoring and control devices for indoor air quality** in ZEBs and all major renovations. This will ensure that the data set on the IAQ performance of the building stock is improved which is the first step on the road to better understanding the IAQ issue in the EU and thus to informing policy at the EU level to drive improvements in the IAQ performance of the building stock. However, the proposed Article does not specify what should be done with the collected data. EPEE strongly encourage that the Member States are required to report the collected data in their national databases and subsequently for publication in the EU Building Stock Observatory (EU BSO). Further, in the absence of clear rules on IAQ data collection, sensor accuracy and parameters, the validity and comparability of the collected data risks to be seriously lacking. EPEE would urge the Commission to explore the possibility of issuing a standardization request for a harmonised standard (hEN) on these issues.

In addition, **the introduction of health externalities in the methodology framework to identify cost-optimal levels** will bring a significant improvement to building regulations in the EU by ensuring that energy efficiency does not come at the expense of indoor environmental quality.

Nevertheless, EPEE believes this major challenge of our building stock should be addressed more decisively via the EPBD, by fully tackling health and comfort of occupants. As the Commission has rightly recognised in the Recommendation on Energy Efficiency First, energy efficiency improvements do not always have a beneficial effect on indoor air quality. It is therefore necessary to ensure that no negative health impacts arise from the planned increase of renovation activities. Moving out of fossil fuels and decarbonising the heating and cooling sector can and should further contribute to indoor environmental quality. Modern heating and cooling systems help guarantee a reliable circulation of fresh air in indoor spaces by supplying outside air and boosting air exchange rates. Built-in and embedded particle-removing solutions in HVAC equipment also help catch particles and reduce their transmission.

To ensure the future EU building stock is healthy as well as energy efficient, the EPBD should require Member States to set minimum IEQ performance standards and to develop and implement calculation methodologies to assess the IEQ performance of buildings at the national

level. EPEE would also propose to strengthen the role of IEQ in the scope of ZEBs national Building Renovation Plans, Renovation Passports and EPCs.

7. Smartness and digitalisation

EPEE welcome the boost that the proposal will give to the deployment of smart Technical Building Systems (TBS), particularly heating, ventilation, and air-conditioning (HVAC) systems and Building Management Systems (BMS).

EPEE supports the improved requirements for Building Automation & Control Systems (BACS) in Article 20. In essence smartness will become mandatory for the vast majority of buildings from 2030, a measure that will accelerate the digitalisation of the building stock and harness its capacity to deliver energy savings from more efficient/responsive use of TBS during their operational lifetimes. However, the new provisions make it imperative that tangible progress is forthcoming from the Commission's work under the Ecodesign Directive (ErP) in the near future. In particular, a vertical approach to regulating 'BACS incorporated in TBS' needs to be confirmed in context of the ENER LOT 38 preparatory study on BACS.

The updated Smart Readiness Indicator (SRI) provisions under Article 13 are also a positive step forward, in the sense that they intend to make the SRI obligatory mandatory for large non-residential buildings from 31 December 2025. This will improve smartness across building categories such as schools, leisure facilities, hotels, hospitals and office buildings. **With the SRI becoming mandatory for some building categories, EPEE believes that an expedited review of the SRI calculation methodology is in order, with the goal to better take into account the health dimension of the building, and tackle flaws in the scheme's implementation and harmonisation.**

Finally, a framework for data exchange and interoperability is essential as digitalisation rapidly proliferates in the context of buildings. However, **EPEE is concerned that the empowerment of the Commission under Article 14 does not appear to be fully placed in the context of the multiple initiatives ongoing within the Commission to support the digitalisation of buildings.** In particular, EPEE would like to highlight the work being undertaken at the product/Technical Building System (TBS) level under the framework of Ecodesign (ErP), notably ENER LOT 38 and ENER LOT 33. Considering the above proposals, it is necessary that the Commission avoids the risk of double regulation, and it would be prudent to quickly achieve tangible results in the product/TBS level developments under ENER LOT 38 and ENER LOT 33, before working on the Article 14 interoperability implementing act.



THE VOICE OF THE REFRIGERATION, AIR-CONDITIONING AND HEAT-PUMP INDUSTRY IN EUROPE

About EPEE:

EPEE represents the Refrigeration, Air-Conditioning and Heat Pump industry in Europe. Founded in the year 2000, EPEE's membership is composed of over 50 member companies as well as national and international associations from three continents (Europe, North America, Asia). With manufacturing sites and research and development facilities across the EU, which innovate for the global market, EPEE member companies realize a turnover of over 30 billion Euros, employ more than 200,000 people in Europe and also create indirect employment through a vast network of small and medium-sized enterprises such as contractors who install, service and maintain equipment. Please see our website (<https://www.epeeglobal.org/>) for further information.