

EPEE Position Paper on the Renovation Wave

July 2020

Executive Summary

EPEE supports the objectives of the planned Renovation Wave to increase energy efficient renovations of all building categories and thus seize the great opportunity to cut energy consumption in Europe's biggest energy consuming sector, and to promote many other societal benefits like health and wellbeing of citizens.

The proposed Recovery and Resilience Facility has the potential to bridge the large financing gap to reach EU 2030 targets and the 2050 climate neutrality objective. However, this potential will only be realised if the Commission ensures that a substantial portion of funds is diverted towards boosting the renovation rate. Funding arrangements should reflect the need to tackle fuel poverty, recognising the broad societal benefits that stem from indoor thermal comfort and healthy buildings.

The Renovation Wave should foster deep or staged deep renovation that favours the deployment of renewables in buildings by promoting an integrated approach to heating and cooling as part of Member States' Long-term Renovation Strategies as well as National Energy and Climate Plans.

The Renovation Wave must support the transition to a future-proof energy system based on renewables – one in which consumers are rewarded for providing demand side flexibility and optimising their energy consumption – and the transition to a future-proof economy that employs sufficient numbers of skilled professionals in the building sector.

1. Promoting deep renovation with an integrated approach to heating and cooling

The Renovation Wave (RW) should promote deep renovation or staged deep renovation and renovation activities that holistically consider the overall energy performance and health benefits of the building, including technical building systems like heat pumps and air conditioners.

EPEE welcomes the Commission's stated ambition to foster renovation in a manner that favours the energy system integration of renewables in buildings, thermal storage, and connection to smart grids¹. To further these aims, the RW initiative should promote an integrated approach to heating and cooling, encouraging synergies between heating and cooling such as heat recovery from cooling systems or the use of heat pumps that are able to provide both heating and cooling.

¹ European Commission, [Energy efficiency in buildings](#) – consultation on 'renovation wave' initiative (May 2020)

Heating and cooling represent approximately 50% of the total final energy consumption in the EU. One fifth of the final energy consumed by heating and cooling is based on renewable energies – most of it is renewable heat and a little more than 10% are heat pumps. However, 80% of the final energy consumption related to heating and cooling is still based on burning fossil fuels. An integrated approach to heating and cooling based on energy efficient electrification can help to reduce the dominance of fossil fuel-based solutions in the heating sector: first, because the share of renewables in the electricity mix is increasing and second, because it will reduce energy consumption for heating purposes.

This is particularly important in public buildings such as schools and hospitals where adequate Indoor Air Quality (IAQ) and thermal comfort are crucial for productivity as well as health and well-being. The World Health Organisation (WHO) estimates that people spend approximately 90% of their time indoors in residential and non-residential buildings and that 26 million European children are living in unhealthy homes. By accelerating the switch to efficient state-of-the-art heating, cooling and ventilation systems, the Renovation Wave will boost both energy efficiency and indoor environment quality of European homes, workplaces, schools and hospitals.

To achieve this, the Commission should utilise existing frameworks such as Long-term Renovation Strategies (LTRS) and National Energy and Climate Plans (NECP) to ensure strong implementation of the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED), and to promote new tools and exchange of best-practice amongst Member States. Member States should consider strengthening their minimum performance requirements in the building sector, for example with mandatory performance improvement plans for larger commercial building owners or landlords. In the LTRS framework, the Commission should mandate the development of concrete measures to boost the uptake of efficient heating and cooling systems, raise indoor environment quality and awareness of energy efficient solutions. Several Member States have already outlined such plans, but the vast majority are yet to submit their LTRSs. Should this persist, the Commission should start infringement procedures accordingly.

In order to strengthen these efforts, the Renovation Wave should set an overarching pan-European objective to increase the rate of deep or staged deep renovations to 3% annually.

2. Utilising new funding instruments

EPEE welcomes the Commission's proposal for a reinforced 2021-2027 Multiannual Financial Framework and the establishment of new financial mechanisms such as the Recovery and Resilience Facility. The Commission has acknowledged the need to divert funds towards a large-scale Renovation Wave to meet the €325 billion annual investment needs in this sector. However, it is unclear what portion of the newly established Recovery and Resilience Facility will be devoted to renovation, and how the mechanism will be leveraged to achieve this.

We encourage the Commission to develop strong conditionality linked to Member States' performance on building renovation and energy efficiency improvements under the LTRS and NECP frameworks, and to explore options for rapid deployment of grants for technical assistance,

one-stops and upskilling of workers. The Commission should also consider whether these objectives could be met by establishing a dedicated fund for renovation by aggregating funding provisions under the MFF and the Recovery and Resilience Fund.

Renovation can be a powerful tool to better value property at resale. However, not all EU citizens can afford renovation operations when more fundamental needs are at stake and need to be fulfilled first. EU funding should tackle fuel poverty and consider measures that allow for a more equal distribution of thermal comfort, as this will lead to more cohesive, productive and healthy societies.²

3. Empowering citizens to optimise energy consumption

If Europe is to achieve climate neutrality by 2050, the energy system needs to be adapted to reward consumers for optimising their energy consumption and providing demand side flexibility and storage solutions to the grid³. To this end, local authorities, transmission and distribution system operators and utility firms are working to establishing tariffs that reward end-users for lowering their electricity consumption during peak hours or when they sell the electricity they generate⁴. Whilst Commission initiatives, such as the Strategy for Energy System Integration, can support regulatory developments to enable such a transition, the Renovation Wave should support the deployment of technical building systems that will allow consumers to reap the full benefits of these changes.

EPB Standards adopted under Mandate M/480, 2010 ensure that these benefits shall be quantified according to unambiguous calculation rules, enforced across Europe, to prove energy efficiencies of technical building systems, respecting part load efficiencies. By helping consumers and businesses invest in building systems like heat pumps or hot water tanks via grants and loans, the Renovation Wave can prepare the EU building stock for this new reality. Packaged solutions comprising of PV panels and battery storage coupled with heat pumps should be recognised as important contributors in this endeavour. In order to incentivise the adoption of such systems, EPEE urges Member States to set ambitious targets for the Renovation Wave in terms of nZEB penetration in the building stock and caps on energy consumption in terms of kWh/m²/year.

These benefits can be further exploited by developing a policy framework that supports responsible consumption via smart appliances (Internet of Things) and digital technologies such as the Smart Readiness Indicator (SRI) as well as building automation and control systems (BACS). BACS can make a major contribution to energy savings by adapting the operation of heating and cooling systems to the actual requirements and enabling systematic monitoring and immediate intervention in case of failures or other problems. Using smart software and control systems should become a prerequisite in deep renovation to optimise and/or maximise the efficient use of heating & cooling services in energy-intensive buildings.

² EPEE, [Count on Cooling: A five-step approach to deliver sustainable cooling](#) (November 2019)

³ European Commission, [2050 long-term strategy](#) (March 2020)

⁴ BEUC, [Fit for the consumer? Do's and don'ts of flexible electricity contracts](#) (April 2019)

In order to reap the full efficiency gains of technologies on the market today, the Renovation Wave should strengthen tools to raise awareness on energy efficiency such as Energy Labels for buildings and products. Information campaigns surrounding new incentives as well as inefficient boiler scrapping schemes could accelerate the rate of uptake of innovative and efficient technologies, thus enabling citizens to contribute quickly to major market transformations initiated by public authorities. Manufacturers of heating and cooling equipment can address the knowledge gaps of their customers by providing online simulation tools that assess the impact of deep renovation in financial terms. Providing such estimates on potential reductions in energy consumption, energy costs and carbon emissions may trigger a greater uptake of efficient heating & cooling technologies.

4. Helping workers acquire the skills needed to boost the renovation rate

EPEE supports the calls for an EU skills initiative in the renovation sector, which includes a gender dimension, in order to engage with stakeholders in retraining, upskilling and capacity building, with a focus on employment. The skills of installers and maintenance professionals are often geared towards conventional heating systems, thereby reducing consumer confidence in switching to new, more efficient alternatives and increasing the burden on consumers to secure appropriate installation and maintenance work. In order to address this, the EU skills initiative should support lifelong learning opportunities to keep up with technological developments, ensure the adaptation of the curriculum to match the industry's evolving needs and better reflect the HVACR sector's specificity in the NACE statistical classification.

About EPEE:

The European Partnership for Energy and the Environment (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.