



## EPBD Revision: European Parliament's fire safety considerations need to be supported

Joint statement of fire, electrical, gas and CO safety organisations, 23<sup>rd</sup> March 2023

Our organisations, focused on improving the fire, electrical, gas and carbon monoxide (CO) safety of European citizens, are **urging the European institutions to incorporate the fire, electrical, gas and CO safety provisions proposed by the European Parliament into the final text of the revised Energy Performance of Buildings Directive (EPBD)**.

The revision of the EPBD is an unmissable opportunity to consider building renovation in a holistic way, placing the safety of EU citizens at its heart. **The European Parliament's report recognizes the importance of electrical, gas and fire safety in the EPBD revision** by increasing energy efficiency while also improving safety and health of people, making the EU building stock more resilient and sustainable for the future.

The EPBD revision aims to decarbonise European buildings by increasing the use of renewable energies, new materials, and solutions/technologies running on electricity. However, these new systems can pose a significant challenge to the fire safety of buildings in the EU if not properly addressed. For instance, electrification solutions can help achieve these goals by providing clean and renewable energy to buildings, reducing the need for fossil fuels, and improving energy efficiency. Estimates indicate that, in Europe, 50% of accidental fires in dwellings have an electrical source and that 132 million domestic electrical installations are likely to be obsolete in the absence of regular inspections in most Member States<sup>1</sup>. However, these innovations can change the fire performance of a building by introducing a new electrical load that can increase the risk of electrical fires if the electrical installation is not upgraded. New methods and construction materials that aim to improve the environmental profile of buildings may not be adequately considered by existing fire safety rules. Getting qualified professionals will also ensure fire safety is considered in a holistic and appropriate way.

If not addressed properly, fire, electrical, gas and CO safety may become a major obstacle to the deployment of solutions and technologies incentivized by the EPBD revision to decarbonise the built environment. Lack of safety awareness and understanding among building owners, occupants, and the general public may lead to tragic accidents and to concerns and resistance to the deployment of decarbonisation solutions.

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<sup>1</sup> Forum for European Electrical Domestic Safety : <https://www.feedsnet.org/>

For all these reasons, **the undersigning organisations call on the co-legislators to support the inclusion, in the final Directive, of the following amendments proposed by the European Parliament in its position on the EPBD revision:**

EP Report	Justification
<p><u>Art. 2, par. 6 - Definitions</u></p> <p>‘technical building system’ means technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, <b>electrically operated solar shading, electrical installations, electric-vehicles charging stations</b>, on-site renewable energy generation and storage, or a combination thereof, including those systems using energy from renewable sources, of a building or building unit;</p>	<p>132 million domestic electrical installations in Europe are considered obsolete and 25 to 30% of domestic fires have an electrical source. At the same time, electrification is intensifying as a key part of the answer to the Fit for 55 objectives. Including the electrical installations into the definition of Technical Building System recognizes their key importance and will allow their correct consideration in any renovation projects so as to ensure their safety and readiness for changes driven by the energy transition.</p>
<p><u>Art. 7, par. 4 – New buildings</u></p> <p><b>By...[24 months after the date of entry into force], Member States shall ensure that new buildings have optimal indoor environmental quality levels, including air quality, thermal comfort, a high capacity to mitigate and adapt to climate change through, inter alia, green infrastructure, adhere to fire safety and safety lighting standards, mitigate risks related to intense seismic activity and prioritise accessibility for persons with disabilities. Member States shall also address carbon removals associated to carbon storage in or on buildings.</b></p>	<p>Modern buildings are built to last up to 100 or more years depending on style, materials or intended use. It is then crucial to ensure that new buildings adhere to fire safety standards and preserve the safety of European citizens over the entire lifespan of buildings.</p>
<p><u>Art 8, par. 3 – Existing buildings</u></p> <p>Member States shall <b>ensure</b>, in relation to buildings undergoing major renovation, <b>that the deployment of high-efficiency alternative systems is encouraged</b>, in so far as that is technically, functionally and economically feasible. Member States shall <b>ensure</b> in relation to buildings undergoing major renovation <b>the implementation of passive heating and cooling elements, healthy indoor environmental quality standards, a high capacity to mitigate and adapt to climate change through inter alia green infrastructures, carbon removals and carbon storage, compliance with fire safety standards, the mitigation of risks related to intense seismic activity and the removal of hazardous substances including asbestos.</b></p>	<p>Renovating both public and private buildings is an essential action and has been singled out in the European Green Deal as a key initiative to drive energy efficiency in the EU building stock and deliver on environmental. However, it is crucial to ensure that building renovations will adhere to fire safety standards (that are defined at national level).</p>

<p><u>Article 9a, par. 9 - Solar Energy in Buildings</u> (part of COM legislative REPowerEU Proposal)</p> <p><b>Member States shall encourage measures to ensure the fire safety of solar energy installations in buildings, including in combination with technical building systems such as domestic batteries or heat pumps for self-consumption.</b></p>	<p>Solar power is seen as a key element of the global effort to reduce carbon emissions because it can be used to reduce both energy consumption and carbon emissions. However, solar panels introduce a new electrical load to buildings, whose fire safety needs to be properly addressed. In addition, improper installation and maintenance of solar panels can pose a fire hazard. As a result, it is crucial to ensure that fire safety measures are integrated when deploying solar panels and other electrification solutions in buildings to reduce the risk of electrical fires and maintain building safety.</p>
<p><u>Article 10, par. 3(c) – Renovation passport</u></p> <p>The renovation passport (...)</p> <p><b>(cc) shall comprise the bill of materials, information on construction products circularity as well as wider benefits related to health, comfort, indoor environmental quality, safety such as fire, electrical, and seismic safety, and the improved adaptive capacity of the building to climate change;</b></p>	<p>Renovation passports are an important instrument providing a clear roadmap for deep or staged renovation, helping owners and investors to plan the best timing and scope for interventions. However, renovation passports should have a holistic approach and make the necessary link between energy efficiency and building safety. For example, information on electrical safety can be based on the latest electrical inspection report as proposed in recital 35c. We strongly support the Parliament proposal.</p>
<p><u>Article 12, par. 8 - Infrastructure for sustainable mobility</u></p> <p><b>(...) By 2025, the Commission shall publish guidelines specifying the standards and protocol to be recommended to national and local public authorities for fire safety in roofed car parks.</b> (...)</p>	<p>The deployment of recharging infrastructure in buildings is essential to support the adoption of e-mobility since most recharging takes place at home or in the office. It is therefore crucial to ensure that fire safety accompanies the deployment of in-building charging solutions, so that a lack of experience and knowledge does not result in local barriers to the installation of charging points or insufficient fire safety precautions. Gathering knowledge and experience at EU level to identify the risks and issue harmonized guidelines can support the installation of recharging</p>

	<p>points while ensuring that fire safety is guaranteed. DG MOVE has already initiated the development of such guidelines. We strongly support the Parliament proposal.</p>
<p><u>Article 20, par. 3 - Inspections</u></p> <p>Member States may set different inspection frequencies depending on the type and effective rated output of the system whilst taking into account the costs of the inspection of the system and the estimated energy cost savings that may result from the inspection. Systems shall be inspected at least every five years. Systems with generators of an effective rated output of more than 290 kW <b>and those emitting carbon monoxide</b> shall be inspected at least every two years, <b>for safety reasons</b>.</p>	<p>It is critical to include a formal reference of carbon monoxide (CO) as a very concrete safety threats to building occupants. CO can leak from faulty gas heating appliances and cause intoxications – which are often fatal.</p> <p>While the phasing gas of gas heating is clearly necessary on the road to net-zero, gas appliances will still be in use for years to come, and it is essential to raise awareness of the CO threat.</p>
<p><u>Article 20, par. 10 - Inspections</u></p> <p>Member States shall put in place inspection schemes including digital tools <b>for industry size installations, and checklists, to verify compliance with the capability requirements set out in Article 11(4b) and (4c), and</b> to certify that the delivered construction and renovation works meet the designed energy performance and are compliant with the minimum energy performance requirements <b>operational greenhouse gas emissions, indoor environmental quality, and fire safety requirements as laid down in building codes or equivalent regulations</b>.</p>	<p>New builds and renovation works should always be executed according to fire safety requirements present in national building regulations/codes. To ensure a minimum level of traceability and compliance to national fire safety regulations, inspections and maintenance work should also be included. We strongly support the reference to fire safety requirements added by the Parliament.</p>
<p><u>Art.22, par. 1 - Independent experts:</u></p> <p>Member States shall ensure that the energy performance certification of buildings, the establishment of renovation passports, the smart readiness assessment, the inspection of heating systems and air-conditioning systems are carried out in an independent manner by qualified or certified <b>companies and experts, using EN-certified test equipment</b>, whether operating in a self-employed capacity or employed by public bodies or private enterprises.</p> <p>Experts shall be certified in accordance with Article 26 of Directive (EU) .../... [recast EED] taking into account their competence.</p>	<p>Alongside the proper installation and regular maintenance of heating appliances, testing is also essential, looking both at their efficiency and safety. Testing should be performed by qualified, certified professionals, using EN-certified test equipment.</p>

Article 23, par. 1 and 1a – Certification of building professionals

1. *By ...[date set out in Article 24(4) [recast EED]] Member States shall **establish a national action plan that aims to provide a sufficient and adequately skilled workforce and** ensure the appropriate level of competence for building professionals **and construction companies**, carrying out integrated renovation works in line with **the established targets and measurable progress indicators pursuant to Article 3(1) of this Directive and** Article 26 of [recast EED].*

*1a. **To achieve a sufficient number of professionals in accordance with paragraph 1, Member States shall ensure that sufficient training programmes leading to qualification and certification covering integrated works, including the latest innovative solutions therefore, are made available. Member States shall put in place measures to promote participation in such programmes, in particular by micro and SMEs and self-employed persons.***

In line with the above comment, it is also essential to ensure building/heating professionals are properly trained, qualified and certified to carry out e.g. heating appliance servicing and testing.

Article 26, par. 1 - Information

*(...) **Member States shall inform the owners, tenants and facility managers of buildings of the different methods and practices that serve to enhance the energy and emission performance, fire, electrical, and seismic safety of a building.***

The role of information in fire safety in the built environment is extremely important because many fires can be avoided with appropriate prevention measures. EU citizens need to be aware of their responsibilities regarding fire safety in terms of practices and methods to reduce fire risks in their homes.

Recital 11

Measures to improve further the energy performance of buildings should take into account climatic conditions, including adaptation to climate change **through green infrastructures**, local conditions as well as indoor **environmental quality, sufficiency and circularity and energy savings, thus promoting more sustainable, inclusive and innovative ways of living in order to adapt to new needs. Such** measures should **be implemented in a way that maximises the co-benefits** of other requirements **and objectives** concerning buildings such as accessibility, **fire safety and seismic, heating and electrical installation safety** and the intended use of the building. **Those co-benefits should be monetised in order to realistically determine the cost-optimality of further energy performance improvements. Moreover, they should ensure the improvement of the situation of vulnerable**

The Commission proposal indicated that renovation should not affect safety, which we support. The Parliament proposed an amendment that maximises the co-benefits such as safety. This wording highlights that renovation should not only maintain safety levels but can also improve safety, which we strongly support. We also support the Parliament proposal to highlight different safety elements: fire safety, seismic, heating and electrical installation safety.

We also welcome the specific attention to vulnerable and low-income households and people affected by energy poverty because experience shows that people

<p><b><i>households, people affected by energy poverty and people living in social housing.</i></b></p>	<p>exposed to energy poverty are also more exposed to fire risk.</p>
<p><u>Recital 29</u></p> <p>To achieve a highly energy efficient and decarbonised building stock and the transformation of existing buildings into zero-emission buildings by 2050, Member States should establish national building renovation plans, which replace the long-term renovation strategies and become an even stronger, fully operational planning tool for Member States, with a stronger focus on financing and ensuring that appropriately skilled workers are available for carrying out building renovations , <b><i>as well as on tackling energy poverty, ensuring electrical and fire safety and improving the energy performance of the worst performing buildings.</i></b> (...)</p>	<p>As stressed by the Parliament, National Building Renovation Plans are a key opportunity to ensure electrical and fire safety.</p>
<p><u>Recital 33</u></p> <p>The concept of ‘deep renovation’ has not yet been defined in Union <b><i>law</i></b>. With a view to achieving the long-term vision for buildings, deep renovation should be defined as a renovation that transforms buildings into zero-emission buildings; in a first step, as a renovation that transforms buildings into nearly zero-energy buildings. This definition serves the purpose of increasing the energy performance of buildings. A deep renovation for energy performance purposes is a prime opportunity to address other aspects such as <b><i>indoor environmental quality</i></b>, living conditions of vulnerable households, <b><i>sufficiency and circularity</i></b>, increasing climate resilience, <b><i>improving environmental and health standards</i></b> resilience against disaster risks including seismic resilience, <b><i>fire and electrical safety</i></b>, the removal of hazardous substances including asbestos, and accessibility for persons with disabilities, <b><i>and enhancing carbon sinks, such as vegetated surfaces.</i></b></p>	<p>A holistic approach of deep renovation concept is needed to cover all aspects including safety. “Fire safety” was included into the Commission proposal, we support the Parliament proposal to refer to “fire and electrical safety”</p>
<p><u>Recital 35c (new)</u></p> <p><b><i>Member States should develop national electrical inspection regimes in light of the fact that a high percentage of domestic and accidental domestic fires have an electrical source and in order to ensure electrical installations are safe and ready for new usages aiming to achieve zero-emissions buildings.</i></b></p>	<p>Electrical inspection regimes are a proven measure to enhance electrical safety. Inspection regimes vary strongly among Member States and progress can be performed. We strongly support this reference. More info: <a href="http://www.feedsnet.org">www.feedsnet.org</a></p>