

EFA's response to the Roadmap on the revision of the Energy Performance of Buildings Directive 2010/31/EU (Directorate General for Energy)

The European Federation of Allergy and Airways Diseases Patients' Associations (EFA) is the voice of the 200 million people living with allergy, asthma and chronic obstructive pulmonary disease (COPD) in Europe. We bring together 39 national associations from 24 countries and channel their knowledge and demands to the European institutions. We connect European stakeholders to ignite change and bridge the policy gaps on allergy and airways diseases so that patients live uncompromised lives, have the right and access to the best quality care and a safe environment.

EFA welcomes the launch of the process for the revision of the Energy Performance of Buildings Directive but regrets that it dangerously neglects the impact buildings have on health. Repeating the same rationale of the 2017 EPBD, the European Commission focuses only on reducing energy-intensive and highly polluting buildings, and does not include the societal ambition of better health outcomes and health protection through renovated and new buildings. The mention to health in the Inception Impact Assessment is vague. More strikingly, the document does not make any reference to the COVID-19 pandemic and the issue of ventilation.

This initiative follows-up the Renovation Wave communication of October 2020, which set the framework for the decarbonisation of the building stock in the EU, including doubling the renovations rate of buildings by 2030. The whole work stream on building renovations arises from the EU Green Deal strategy, and aims to contribute to its climate, environmental and health objectives.

EFA cannot agree more with the Commission's assessment that the existing legislation on energy performance of buildings needs to be revised, if the Renovation Wave is to succeed. However our basis for such assessment is hugely different. Only a more ambitious EPBD based on measures enshrined into legislation would ensure proper implementation of the Renovation Wave vision, and the specific targets that will arise from the revised EPBD. While we **strongly favour Option 3 as it provides for the amendment of EPBD, we strongly encourage the European Commission to apply the principles of policy coherence, health-in-all-policies and One Health, and to widen the scope of the EPBD to benefit citizens health beyond the necessary actions for the economy and the environment.** We outline our thoughts below.

1. Strengthening the health aspects in the performance of buildings: the case for Indoor Air Quality

As stressed in EFA's response to the Renovation Wave consultation¹, a greener building sector can bring multiple benefits with regards to EU's climate change and environmental targets: the acceleration of renovations helps reduce the environmental footprint of buildings, thus contributing to less greenhouse gas emissions and better air quality. Importantly though, renovations can also drive the **transition towards healthy living closed environments**, reducing disease risk factors and allowing vulnerable groups of the population such as chronic respiratory patients living with allergy, asthma and COPD live better lives. This objective becomes essentially urgent in the wake of the COVID-19 pandemic.

In practice, **people may be exposed to indoor air pollution literally everywhere**: workplaces containing volatile harmful chemicals, mouldy and damp buildings, households using solid fuels to

¹ <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12376-Commission-Communication-Renovation-wave-initiative-for-the-building-sector/F524272>

cook and heat, bars and restaurants filled with second-hand smoke², are only a few situations in which indoor air pollutants are still endemic in the EU. A study from 2016 showed that over 2 million disability adjusted life years (DALYs) are annually lost in the EU due to polluted indoor air³.

There is little doubt that indoor air pollution is especially harmful to **human respiratory health**. Long-term exposure to polluted air indoors can result in the development of respiratory diseases, aggravate allergy and chronic respiratory diseases such as asthma and chronic obstructive pulmonary disease (COPD)^{4,5,6}. As regards allergy patients, indoor air quality can have a significant impact on them too. Allergens commonly found in households or other indoor places include dust mites typically gathered in carpets, furniture and bedding; pet dander, urine or saliva; and mould, often caused by house plants, or poorly maintained sinks and water pipes⁷.

The discussion on the energy performance of buildings is inherently linked with Indoor Air Quality (IAQ) and its multiple sources. **The quality of the air we breathe indoors is a key environmental determinant of public health**. Poor indoor air quality is responsible for 10% of non-communicable diseases globally⁸. EFA, in particular, has been advocating for better indoor air quality since its creation in 1991, including with studies funded by the Commission such as the THADE (Towards Healthy Air in Dwellings in Europe) project⁹; as well as in the context of EU legislative procedures e.g. the revision of the Ambient Air Quality Directives¹⁰, the Zero Pollution Action Plan¹¹ and the revision of the Construction Products Regulation¹².

² Special Eurobarometer 458 Report "Attitudes of Europeans towards tobacco and electronic cigarettes", 2017 <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2146>

³ A. Asikainen, P. Carrer, S. Kephelopoulos, E. de Oliveira Fernandes, P. Wargocki, O. Hänninen, "Reducing burden of disease from residential indoor air exposures in Europe", *Environmental Health*, March 2018, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4895703/#:~:text=Conclusions,and%20by%20controlling%20indoor%20sources>

⁴ X.Q. Jiang, X.D. Mei, D. Feng, "Air Pollution and Chronic Airway Diseases", *Journal of Thoracic Disease*, 2016 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4740163/>

⁵ E. Garshick, "Effects of short- and long-term exposures to ambient air pollution on COPD", *European Respiratory Journal*, 2014 <https://erj.ersjournals.com/content/erj/44/3/558.full.pdf>

⁶ D. Schraufnagel et al., "Air Pollution and Noncommunicable Diseases", *Chest Journal*, 2019 [https://journal.chestnet.org/article/S0012-3692\(18\)32723-5/fulltext#sec5](https://journal.chestnet.org/article/S0012-3692(18)32723-5/fulltext#sec5)

⁷ Asthma and Allergy Foundation of America, "What is Indoor Air Quality?" [https://www.aafa.org/indoor-air-quality/#:~:text=Indoor%20air%20can%20have%20a,dander%20\(dead%20skin%20cells\)](https://www.aafa.org/indoor-air-quality/#:~:text=Indoor%20air%20can%20have%20a,dander%20(dead%20skin%20cells))

⁸ World Health Organisation Regional Office for Europe, *Noncommunicable Diseases and Air Pollution*, 2019 http://www.euro.who.int/_data/assets/pdf_file/0005/397787/Air-Pollution-and-NCDs.pdf?ua=1

⁹ M. Franchi et al, *Towards Healthy Air in Dwellings in Europe. The THADE Report*, 2007, <https://www.efanet.org/news/1629-46efa-thade-project-results-published-in-allergy>

¹⁰ European Federation of Allergy and Airways Diseases Patients' Associations, EFA's response to the Inception Impact Assessment on the Revision of the Ambient Air Quality Directives, 2021 https://www.efanet.org/images/2021/EFA_position_Revision_of_the_AAQDs.pdf

¹¹ European Federation of Allergy and Airways Diseases Patients' Associations, EFA's response to the EU Action Plan "Towards a Zero Pollution Ambition for Air, Water and Soil – building a Healthier Planet for Healthier People", 2020 https://www.efanet.org/images/2020/EFA_response_on_ZPAP_Roadmap.pdf

¹² European Federation of Allergy and Airways Diseases Patients' Associations, EFA's response to the public consultation on the review of the Construction Products Regulation, 2020 https://www.efanet.org/images/2021/CPR_review_EFA_final.pdf

In 2020, a group of 9 patient and healthcare professionals, the European Lung Health Group, launched the Breathe Vision 2030, a document calling for a framework to address indoor air pollution, and greater investment indoor environmental pollution and risks to respiratory health in the workplace¹³.

Today, EU-level discussions largely focus on outdoor air quality, as demonstrated by the Zero Pollution Action Plan and the expected revision of the EU Ambient Air Quality Directives. While there are urgent reasons to tackle air pollution outdoors, the current discourse reveals the long distance that needs to be covered in order to address Indoor Air Quality and ensure a holistic approach to air quality. The revision of EPBD is an excellent starting point to put actions into motion in this regard.

EFA urges the Commission to complement the targets on the energy efficiency of buildings with measures that address Indoor Air Quality. To this end, we would like to present the following recommendations:

- **Ensure healthy indoor environments through a mandatory Indoor Air Quality certificate**

The Commission should propose a harmonised measurement method of IAQ on the basis of a **mandatory indoor air quality certificate for all new and renovated buildings**. The certificate should act as a reliable source of information, listing the pollutants that should be tested (even if at the beginning the list cannot be exhaustive), and measuring contaminants such as dust, pollen, mould, compounds from building materials, and the conditions which lead to increase the levels of pollutants such as temperature, relative humidity, and elevated ozone. This is an ask already put forward by the European Parliament the resolution “Clean Air for All: A Europe that Protects”¹⁴. We consider an indoor air quality certificate would be a perfect tool to inform inhabitants and workers of the measures in which their allergy and respiratory health is protected.

Such as certificate could be established following the health-based ventilation guidelines¹⁵, developed through the HealthVent project in 2016, which aim to further define harmonised testing standards to measure air pollution in indoor environments beyond air conditioning and ventilation systems in European buildings.

- **Prepare the next generation of buildings for future respiratory threats**

The level of pollution and therefore the healthiness of an indoor environment is very much influenced by the quality of ventilation and air conditioning. Thus the IAQ certificate suggested above should contain a proper **assessment of the ventilation and air conditioning systems** of the building, based on harmonised testing standards. In this regard, Member States shall establish and enforce inspection processes with clearly defined criteria for residential and non-residential buildings in Europe, subject to certain conditions.

Learnings from the current SARS-CoV-2 pandemic should lead the EU to encourage renovation and construction with a better generation of ventilation systems, that address not only CO2 concentrations but that are capable of filtering aerosols when necessary. We encourage the

¹³ European Lung Health Group, BREATHE Vision for 2030, 2021 <https://www.breathevision.eu/vision-2030>

¹⁴ European Parliament motion for a resolution “Clean Air for All: A Europe that Protects”, 2019, https://www.europarl.europa.eu/doceo/document/TA-8-2019-0186_EN.html?redirect

¹⁵ European Commission (EU Science Hub), *Reducing burden of disease from residential indoor air exposures in Europe*, 2016 <https://ec.europa.eu/jrc/en/publication/reducing-burden-disease-residential-indoor-air-exposures-europe-healthvent-project>

Commission to take into account the latest European Parliament research study on this issue¹⁶.

- **Provide certainty on the healthiness inside buildings**

Indoor air quality has economic and social dimensions too. In light of the many changes that the COVID-19 pandemic is bringing, including a general concern about the healthiness of closed spaces, EFA encourages the EU to launch a post-COVID Eurobarometer on the perception of Europeans on closed spaces. That Eurobarometer is key to understand the awareness and importance that Europeans grant not only to indoor air quality as an item, but also the whole technology around it, ventilation, heating and cooling in closed, but shared, spaces.

2. Establishing financial instruments to encourage healthy building renovation

As the Inception Impact Assessment rightly points out, renovations typically require considerable investment that for the most part is upfront e.g. the cost benefits are not immediately palpable. Given that deep renovations might be unaffordable for the majority of households in the EU, the Commission should provide smart solutions to enable a far-reaching renovation trend and decrease the financial burden of renovations.

While at the designing stage, it is of utmost importance that financial instruments for building renovation are also linked to outcomes other than energy efficiency. We firmly believe that **financial incentives should go hand-in-hand with the protection of human health and wellbeing**. For example, by addressing air quality indoors for the protection of vulnerable groups of the population such as children, the elderly and people living with allergy and chronic respiratory conditions. A financing approach based on health-related criteria has the potential to lead will improve health outcomes.

There are several national examples to draw upon: the 'Warmth and Wellbeing Pilot Scheme' of Ireland, which facilitated energy upgrades in residential buildings on the basis of health referrals with no cost to the homeowners¹⁷; or the Swedish scheme supporting house adjustments through a municipal grant, specifically addressed to those with a disability – including those with severe allergy.

Therefore, EFA strongly believes that the EU can become a driving force and key benefactor of deep renovations in the Europe, while ensuring the protection of health, by:

- **Encouraging and funding national financial schemes tailored to health needs**

A revised EPBD should promote the establishment of health-related criteria on renovations, ensuring the proliferation of existing national schemes using this approach. The funding of national schemes and instruments should depend, among others, on the level of health protection they guarantee to vulnerable groups of the population such as children, the elderly and people with chronic respiratory conditions. Furthermore, EFA encourages the Commission to prioritise older buildings as well as social establishments such as schools, hospitals and retirement houses.

¹⁶ Policy Department for Economic, Scientific and Quality of Life Policies Directorate-General for Internal Policies "Air pollution and COVID-19", January 2021:

[https://www.europarl.europa.eu/RegData/etudes/STUD/2021/658216/IPOL_STU\(2021\)658216_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/658216/IPOL_STU(2021)658216_EN.pdf),

¹⁷ Sustainable Energy Authority of Ireland seai.ie/grants/home-energy-grants/free-upgrades-for-eligible-homes/warmth-and-wellbeing/