Healthy Buildings for All

Put people's health and well-being at the center of EU built environment

Joint industry statement

The informal Indoor Environmental Quality (IEQ) Gathering brings together European industry associations, which represent companies involved in technical building systems and their maintenance. Our objective is to collectively promote healthy buildings through an adequate level of indoor environmental quality.

Healthy Buildings are buildings in which the indoor environment is healthy for people to live in and carry out their activities. An appropriate indoor air quality, a lighting design adapted to the needs of the occupants, sufficient access to daylight and views and an adequate mechanical or hybrid (natural ventilation assisted mechanically) ventilation are important for creating a healthy indoor environment. Thermal comfort, moisture, dust and pests, water quality, noise, as well as safety and security are aspects that must also be considered in the context of any healthy building.

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[1]. Moreover, Copenhagen Economics[2] evaluated the health co-benefit of energy efficient renovations in the EU to amount to 42 billion euros annually in a low energy efficiency scenario and as much as 88 billion euros in the case of a high energy efficiency one. It is also to be noted that, due to a poor indoor air quality alone, 120 000 Europeans die prematurely every year incurring an annual cost of 260 billion Euro[3].

With 97%[4] of EU buildings in need of renovation, the EU Renovation Wave Initiative and the upcoming targeted revision of the Energy Performance of Buildings Directive (EPBD) represent a true opportunity to boost both energy efficiency and indoor environmental quality that cannot be missed: by making the most of an appropriate indoor air quality, human-centric lighting, acoustic, thermal comfort and control and automation systems, the health and well-being of the occupants will be improved and productivity gains delivered.

[1] WHO Regional Office for Europe, OECD (2015). Economic cost of the health impact of air pollution in Europe: Clean air, health and wealth. Copenhagen: WHO Regional Office for Europe

[2] https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/8/198/0/Multiple%20benefits%20of%20EE%20renovations%20in%20buildings%20-%20Full%20report%20and%20appendix.pdf

[3] Please refer to footnote 1

[4] https://www.bpie.eu/wp-content/uploads/2017/12/State-of-the-building-stock-briefing_Dic6.pdf

We call upon EU policymakers to:

- **Set mandatory minimum requirements for indoor environmental quality in the upcoming revision of the EPBD and accelerate the replacement of old systems.** These requirements would be met through the implementation of currently available technologies in the fields of ventilation**,** cooling, heating, daylight and electric lighting, air-conditioning, dehumidification, plumbing, and building automation and controls.

- **Support reduced aerosolised transmission of respiratory infections**. The mandate of setting minimum IEQ requirements in the EPBD would also drive the uptake of mechanical ventilation[5], air-conditioning and air treatment systems, thereby improving air dilution and reducing the aerosolised contamination risk in buildings[6].

- **Introduce a Deep Renovation Standard in the EPBD that includes minimum IEQ Performance Requirements**.

- **Include IEQ as part of an updated framework for the Energy Performance Certificates** in the upcoming revision of the EPBD.

- **Set requirements for the inspection of technical building systems:** The requirements for Member States to implement inspection schemes for Technical Building Systems (TBS) in the EPBD should be extended to all TBS contributing to IEQ parameters, especially to indoor air quality and to lighting, as well as to thermal comfort. Stand-alone mechanical ventilation, lighting systems and building automation control systems should be covered in this regard.

- **Set requirements to ensure the deployment of smart technologies for healthy buildings and an improved smart readiness indicator (SRI).** The SRI should consider health aspects on an equal footing with other factors such as, for instance, energy savings and energy demand flexibility to fully reflect the importance of indoor environmental quality.

- **Include indoor environmental quality indicators in the EU Building Stock Observatory.** All the factors contributing to indoor environmental quality, such as automation, ventilation, electric lighting, daylight and views, indoor air quality, thermal comfort, moisture, dust and pests, water quality, noise, and safety and security should be included.

- **Incentivise training and certification schemes for building professionals, such as designers and installers and Facility Managers.** The design, deployment and maintenance of the technologies needed to achieve and maintain an adequate indoor environmental quality, require advanced design and proper implementation. The professionals in charge are predominantly employed by small and medium-sized enterprises (SME), that are currently trying to meet growing demand for their services with a limited, often inadequately skilled, and ageing workforce. Actions are therefore needed to incentivise technical education, apprenticeships, as well as up- and re-skilling.

- **Ensure the enforcement of Member States' Long-term Renovation Strategies (LTRSs).** Post occupancy evaluations of buildings by qualified assessors would provide a source of information to monitor the state of the building stock, inform policy makers and improve best practices.

[5] The Lancet, 27 May 2020, https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30245-9/fulltext
[6] Joint industry statement - Recognise indoor air pollution as a health risk – industry associations issue urgent COVID-19 statement to EU institutions

- **Set mandatory minimum requirements from 2025 for new and existing buildings of continuous monitoring, evaluation and reporting of IEQ parameters**, including means to make these values visible to the occupants and to inform them about deviations between actual and target values.

List of co-signatories

APPLiA – *Home Appliance Europe*

AREA *– European association of refrigeration, air conditioning and heat pump (RACHP) contractors*

EHPA *– European Heat Pump Association*

EIHA *– European Infrared Heating Alliance*

EPEE *– The voice of the Refrigeration, Air Conditioning and Heat Pump Industry in Europe*

eu.bac *– European Building Automation Controls Association*

EUHA *– Electric Underfloor Heating Alliance*

Eurovent *– European Association for Indoor Climate, Process Cooling and Food Cold Chain Technologies*

EVIA *– European Ventilation Industry Association*

GCP Europe *– European association for building engineering services*

LightingEurope *– The voice of the lighting industry*

REHVA – *Federation of European Heating, Ventilation and Air Conditioning Associations*