

EVIA's reaction to the Housing Advisory Board recommendations for a European Affordable Housing Plan

THE RIGHT TO HEALTHY AIR DOES NOT STOP AT YOUR FRONT DOOR

The [European Ventilation Industry Association](#) (EVIA) represents the interests of 40 European mechanical ventilation manufacturers and six national associations across Europe, realising an annual turnover of over EUR 7 billion and employing more than 45,000 people. EVIA aims to promote the implementation of highly energy efficient mechanical ventilation applications across Europe, with high consideration for health and comfort aspects.

EVIA warmly welcomes the Housing Advisory Board recommendations to the European Commission for the European Affordable Housing Plan. **The recommendations provide a comprehensive analysis that, we are pleased to notice, incorporates several elements that strongly align with EVIA's own recommendations.** We especially note the following positive aspects:

- ✓ **IAQ and healthy buildings.** We welcome the recognition that one in four Europeans lives in buildings with IAQ below national standards, and that healthy buildings reduce broader healthcare and societal costs. We also value the emphasis on educating residents on the wise use of energy at home, which we suggest being complemented with information initiatives also on IAQ, proper ventilation and risks associated with an inadequate indoor environment.
- ✓ **A comprehensive understanding of “affordability” and “habitability”.** EVIA strongly supports the Board's recognition that affordability must go beyond initial purchase or rental cost to include lifetime running costs, housing quality, and energy efficiency. Moreover, we endorse developing EU-level minimum standards addressing habitability, IAQ, dampness, and energy performance, starting from the proper implementation of indoor environmental quality (IEQ) elements established by the Energy Performance of Buildings Directive (EPBD). The Board's call to prioritise renovation, including energy-efficient retrofitting and quality improvement, is particularly relevant to ensure good indoor air quality (IAQ) while at the same time delivering on affordability.
- ✓ **Streamline but do not undermine effective regulation.** We strongly agree that deregulation should not be promoted, and that the full delivery of the EPBD, through an ambitious transposition by the member states, is vital in embedding affordability, health, energy-efficiency and sustainability into residential buildings.

Our recommendations to further strengthen the Plan

While the report captures many key aspects to remedy the housing crisis and the needs of European households, some critical elements related to **healthy indoor environments and mechanical ventilation deserve stronger visibility** to ensure that homes deliver not only affordability, but also wellbeing and long-term energy efficiency as well as sustainability. Concretely, we recommend more emphasis on the following:

- ➔ **Explicitly include healthy indoor air quality, through adequate mechanical ventilation, as an essential aspect of decent housing.** With Europeans spending 90% of their life indoors, good indoor air quality is a critical element of health that should not be overlooked. Mechanical ventilation, enabling to optimise the energy needs of dwellings, will also improve their sustainability and affordability dimensions. This can be achieved specifically through the transposition of the EPBD's IAQ and ventilation requirements.
- ➔ **Integrate IAQ monitoring systems in residential buildings,** particularly for new constructions and major renovations, and incentivise the installation of mechanical ventilation, at least for social housing.

- **Support projects that gather data on IAQ** in various housing contexts to inform policy and best practices.
- **Finance information initiatives** by Member States to educate residents on IAQ, proper ventilation and risks associated with an inadequate indoor environment.

Window airing, natural ventilation or mechanical ventilation?

Finally, we would like to provide a **technical clarification regarding the reference to “natural ventilation”** as low-tech solutions, particularly in the context of climate change and urban heat. It is important to distinguish clearly between natural ventilation and window airing, as the two are often conflated but serve different purposes and operate under different constraints.

Natural ventilation refers to the passive and continuous movement of air through purpose-designed architectural features (such as stack ventilation without a mechanical extraction element) that allow for air exchange without requiring residents’ intervention.

Window airing requires occupants to manually open windows to bring in outdoor air. Although simple, it is highly dependent on occupant behaviour and subject to numerous constraints such as noise, potential outdoor pollution, security, changing outdoor conditions and uncontrolled energy losses considerations. Indeed, opening windows during a heat wave in summer would result in significantly losing the coolness of the building and should therefore be avoided.

In new or refurbished buildings, which are well insulated, **approximately 50% of the energy demand can stem from heat and cold losses due to air renewal through both window airing and natural stack ventilation**, depending on the use of the building. Moreover, in many urban environments, noise, air pollution, and safety concerns limit the feasibility of opening windows when the building allows it.

The primary solution should be the use of mechanical ventilation systems. These involve the use of air supply through inlets, fans and ducts to circulate and replace air, ensuring an adequate flow of incoming fresh air in the least polluted rooms, while stale air is expelled outside of the building from the most polluted ones. Energy recovery systems minimize heat losses in winter and cold ones in summer, while demand-controlled systems adjust air renewal rates based on occupancy and air quality, optimizing energy needs. Both technologies can be combined. An ideal energy-efficient home is airtight thanks to appropriate insulation, with a mechanical ventilation system renewing the air in a controlled way, thereby contributing to ensuring a good indoor air quality, keeping occupants healthy and buildings in good shape while reducing energy consumption to what is strictly necessary to do so avoiding unnecessary energy waste.

Mechanical ventilation systems often provide the most consistent, health-protective, and energy-efficient solution, particularly in urban areas. At night in summer, when the outside air temperature is lower than the one inside buildings, mechanical ventilation systems can usefully renew the indoor air to help cool down dwellings. Mechanical ventilative cooling is mentioned as a cooling solution for buildings by the European Commission in its guidance for the transposition of the Energy Performance of Building Directive. Moreover, the Commission does not consider it as an active means.

Conclusions

EVIA thanks the Housing Advisory Board for its constructive and comprehensive work. We are confident that, by incorporating also EVIA’s recommendations, the Commission’s Plan will create an appropriate framework for affordable, healthy, energy-efficient and sustainable housing.

Please feel free to contact EVIA for inquiries at secretariat@evia.eu.