REHVA Federation of European Heating, Ventilation and Air Conditioning Associations

EVIA European Ventilation Industry Association

Europe needs smart regulation for energy efficient and healthy buildings

European people living in urban areas **spend up to 90 % of their life in buildings**. Indoors, people are **exposed to up to 5-times higher pollution**, which cause a wide range of diseases and health problems. A poor indoor environment quality (IEQ) also reduces productivity, performance at work and in schools. There is significant scientific evidence on the health benefits of improved indoor air quality (IAQ) through source control, ventilation technology and adequate filtration of incoming air.

Buildings energy performance has gained a lot of attention in the past decade due to European policies and energy efficiency targets. Improving the energy efficiency of buildings is a key priority of the EU Energy Union. However the European Energy Performance of Buildings Directive (EPBD) was implemented in most Member States without paying attention to indoor environment quality by setting minimum ventilation and IEQ requirements. **Indoor environment quality and minimum energy performance requirements shall go hand in hand.** Implementing energy efficiency measures in buildings (thermal insulation of envelope, tight windows, etc.) without a holistic approach might create even new IEQ problems like poor indoor air quality, formation of harmful mould, overheating of buildings. There is a danger that energy is saved while the indoor air quality is deteriorated, causing health problems and decreased workforce productivity.

EU projects[1] and studies[2] revealed the lack of appropriate and harmonised regulations on IEQ and ventilation across EU Member States. The recast Energy Performance of Buildings Directive (EPBD) mentions that indoor climate cannot be compromised. **The upcoming EPBD review shall** strengthen this important statement and **prescribe binding minimum ventilation and IEQ requirements to be defined, audited and reported in a harmonised way in building regulations** across Europe. Ventilation energy demand shall be calculated and expressed in a transparent way, and not be hidden in total heating and cooling energy demand.

We fully support the energy refurbishment of the European building stock to nearly zero energy level but we call for appropriate legislation on indoor environment quality ensuring that energy efficiency initiatives do not jeopardize the health and comfort of building occupants. Leading European HVAC technologies enable us to build and renovate energy efficient, healthy and comfortable buildings.

European legislation, standards and policy measures have to make sure that indoor environment quality requirements are set and complied on the way of transition to a high energy performing European building stock.

[1] Health-based ventilation guidelines for Europe, HealthVent project, www.healthvent.eu,

[2] Indoor air quality, thermal comfort and daylight. An analysis of residential building regulations in 8 Member States. BPIE, 2015.