

Position paper of VEUKO about the reduction of particulate matter emissions of domestic fireplaces

Preamble

Domestic fireplaces are very popular throughout Europe. At the same time, these fireplaces are criticized in the discussions on air quality control, especially because of particulate matter emissions (PM 10 or PM 2.5). The background is that there is a requirement in the European Union for measuring air quality (PM 10 or PM 2.5 and ozone). There are also actions ordered from EU side, if the air quality (immissions) of the measured pollutants is not met. Since other causers of pollutions such as transport and industry are often not attacked for political reasons, the focus is often on domestic fireplaces.

VEUKO is committed to clarify and inform in the subject of particulate matter emissions from domestic fireplaces.

The public discussion gives the impression that they are steadily increasing. But in fact they have been significantly decreasing in Europe for many years. For example PM 2.5 emissions have declined by 28% over the period 2000 to 2014 (Figure 1).

From January 1st 2022 the Ecodesign Directive (EU Regulation 1185/2015, "ecodesign requirements for solid fuel local space heaters") determines ambitious minimum standards for emissions and energy efficiency for placing domestic fireplaces on the market. Since January 1st 2018 the EU Regulation 1186/2015 requires energy labeling of domestic fireplaces (Figure 2).

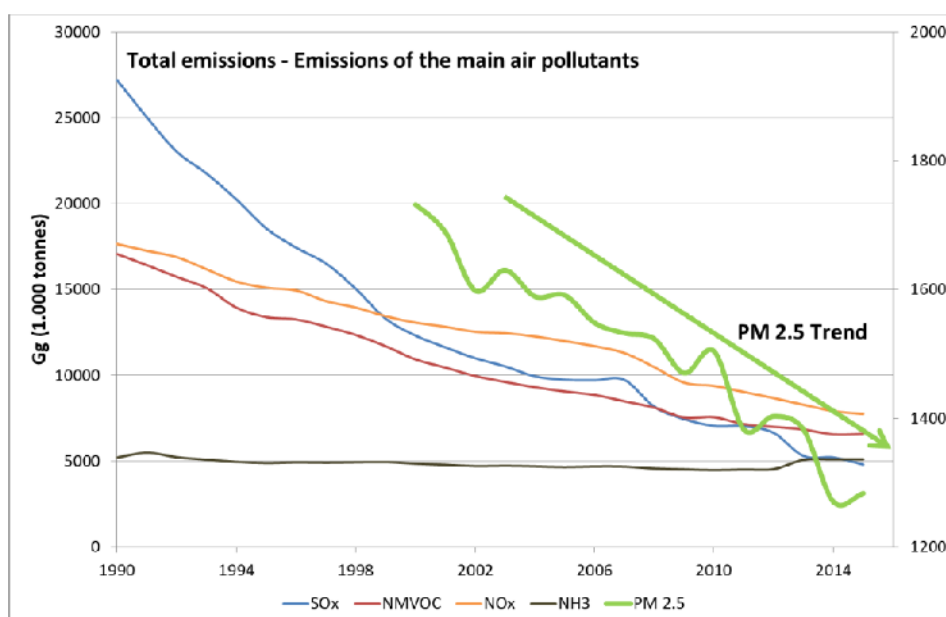


Fig. 1: Source: European Environment Agency

(<https://www.eea.europa.eu/data-and-maps/daviz/air-pollutants-emission-trends-in-1#tab-dash-board-03>)

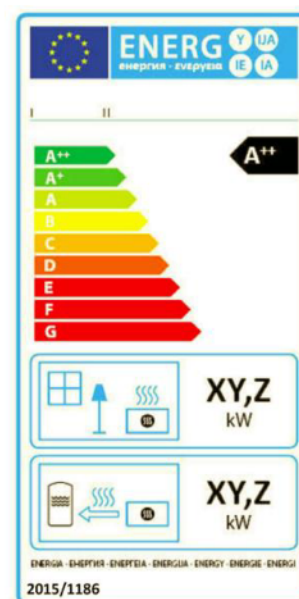


Fig. 2: Energy label of a domestic fireplace

Analysis

Regulations for the reduction of particulate matter emissions from domestic fireplaces are usually used when placing new installations on the market (e.g. EU Regulation 1185/2015).

In the perspective of VEUKO this is an inadequate approach as it only covers new installations and not the existing fireplaces. Furthermore it ignores the operator's influence. Due to the high number of existing installations and the relatively low renewal rate, actions for proper heating and maintenance of existing fireplaces are very important and have high potential for improvement. Especially old installations with poor performance should be replaced by new and modern fireplaces.

Demands of VEUKO on policy makers for further efficient reduction of particulate matter emissions from domestic fireplaces

1. **Promote proper heating:** The use of dry, untreated wood as fuel (water content <20%) as well as the correct ignition (top down) is essential! Information activities for the public have to be created (e.g. information folders, social media campaigns).



Source: HKI/FNR

Further information: www.richtigheizen.at, www.fairfeuern.ch, www.richtigheizenmitholz.de

2. **Promote regular maintenance:** Domestic fireplaces should be regularly maintained by the specialized companies. The complete domestic fireplace should be cleaned and the seals (stove door, flue gas connector), if necessary, should be renewed. The maintenance should be financially supported.
3. **Replacement of particularly old installations with poor performance:** Appropriate actions have to be developed which make it possible to replace domestic fireplaces with particularly bad emissions (about 10-20% of the existing installations) by modern ones.
4. **Monitor existing legal regulations:** Compliance with EU Regulation 1185/2015 must be observed. This is much more useful than a further tightening of the limits.