

## **The review of the Fluorinated Gas regulation shall come in support to the Renovation Wave, not render our objectives almost impossible to attain**

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We are all aware that buildings are responsible for 36 % of the EU's total carbon dioxide (CO<sub>2</sub>) emissions. And while this might sound like a useless reminder, it is important to remember that three quarters of the existing building stock will still be standing by 2050. Therefore, ensuring that our buildings are highly energy efficient – meaning renovating them – is surely the most logical and cost-effective way to reduce GHG

emissions. This not only brings multiple benefits to society, promoting energy security and cutting the €420 billion of fuels we import, but also improve the lives of buildings' occupiers.

In the toolbox of solutions to render building envelopes more energy efficient, thermal insulation comes first. And among the plethora of products available on the market, there is one standing out for its exceptional performance: in-situ spray polyurethane foam. This kind of product is used mainly in renovation projects and addresses difficult to treat spaces.

This is noteworthy because in-situ spray foam brings mechanical benefits to the overall structure, has long lasting water resistance properties, and comes with a top-class insulating power – all those attributes being connected to the use of very low Global Warming Potential (GWP) Hydrofluoroolefins (HFOs). In-situ spray foam with HFOs simply excels where other insulation materials fail i.e. where there are complex shapes and geometries, limited thickness requiring a very high insulating power material, demanding fire safety requirements, time-constrained construction works...

The latest news on the review of the Fluorinated Gas regulation indicates that a ban on the use of all F-Gases in foam is on the table. Such a move would have significant adverse implications for the flagship "Renovation Wave" project! Our industry has made it clear that no alternatives to those low GWP substances exist that are both safe and capable of delivering equal performance (especially in space limited renovation projects which are more and more encountered). For instance, moving to open-cell polyurethane foam (also part of my industry portfolio) will come with a 40 % energy efficiency penalty. Internal calculations show that moving from low GWP HFO to those products, and despite its relatively limited market share, would correspond to untapped energy saving potential of 560 GWh/year, equivalent to the 2021 household electricity consumption of 335,128 Europeans!

At this point of the F Gas regulation review process, we urge decision-makers to craft legislations that deliver on what matters for the achievement of our climate objectives and for Europeans. A full F-Gas ban would wipe out one essential solution to deal with hard to renovate buildings.

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The superior performance of our insulation products is due to the presence of a blowing agent trapped in a closed cell polymeric matrix. When produced in factories, the most commonly used blowing agent is pentane (hydrocarbon), either as a pure isomer or as mixes of its isomers. In certain discontinuous production lines and for in-situ foam formulations, the blowing agent must not be flammable under normal application conditions and HFC-365mfc or HFC-245fa have been employed. In advance of the F Gas regulation timeline (2023 as the cutoff date set in annex I for their usage in polyurethane foam), those substances are now being replaced by HFO-1336mzz-Z and HCFO-1233zd-E listed under annex II. Those former substances have 99 % lower Global Warming Potential (GWP) vs. their predecessors and also exhibit a better thermal conductivity.

*PU Europe is the European voice of the polyurethane (PUR / PIR) insulation industry from construction products manufactured in factories to in-situ formed PU foam. The 110 manufacturing sites and more than 20,000 direct jobs in the PU rigid foam sector contribute to tackling the carbon footprint of the buildings stock responsible for around 36% of the CO<sub>2</sub> emissions of the European Union (more information about us via [www.pu-europe.eu](http://www.pu-europe.eu) and lobbying transparency register ID number 27993486325-38).*