EUMEPS op-ed on the 'Renovation Wave'

Thermal Insulation Improvements in the EU Building Renovation Wave Also Promote the Circular Economy and Building-Integrated Solar Systems

By Paolo Garbagna

One of the biggest challenges for the European Union and its plans for a European Green Deal is knowing where to start. A hydrogen economy and building efficiency and circularity and more renewables all sound great, but you can't do them all at once and, indeed, shouldn't do them all at once.

The good thing about the European Commission's recent call for a public-private EU Renovation Wave is that improved building efficiency—which is essential to the EU's goal of going carbon neutral by 2050—can also promote at least two other high-level goals: increased use of recycled materials and increased uptake in rooftop solar systems.

First, it's worth remembering that building efficiency ticks the first box in the green economy rule of Reduce, Reuse and Recycle. Europe has a large stock of old buildings, but only around 1% of the EU's buildings are renovated each year. That means there's a lot of valuable energy wasted heating and cooling buildings that could easily be made more energy efficient. The less energy wasted, the more energy can be diverted to better uses.

Expanded polystyrene (EPS) has proven to be one of the best thermal insulation materials. Consisting of 98% air, it is inherently resource efficient. And thanks to its outstanding insulation performance, EPS insulation saves a lot of energy and CO2 over its entire, long service life, which sometimes lasts for 100 years. At the end of its service life, it can be recycled, including back into new building insulation (PolyStyreneLoop, an EU LIFE-supported industry project, demonstrates economically viable, closed-loop recycling of EPS insulation at industrial scale).

A recent independent comparative assessment conducted for public authorities in Germany underlined the outstanding ecological performance of EPS insulation throughout its full life cycle, including at the end of its (first) life. Indeed, for many key applications, such as ETICS (External Thermal Insulation Composite System), flat roof and perimeter, it ranks EPS insulation as the *most* ecological option among renewable, mineral-based and other synthetic materials.

The European Commission has also noted that building renovation can help create demand for recycled materials and this also promote the circular economy. EPS is widely recycled already, but too much still ends up in landfills and incinerators for lack of efficient collection and recycling systems. As EPS building insulation can be made from recycled EPS fish boxes and other packaging materials, the Renovation Wave could indirectly create demand for all EPS waste.

The EPS industry has been working towards further increasing EPS recycling by investing in new technologies to exceed the EU's goals by 2030. EUMEPS has publicly pledged that the European EPS industry will recycle 46% of EPS waste, i.e. 257,000 tons per year, by 2025. EUMEPS has also been actively cooperating with more than 200 other stakeholders in the Circular Plastics Alliance, with a view to collectively using 10 million tons of recycled plastic in European products by 2025. Initiated by the European Commission, this Alliance represents the whole European plastic industry.

Lastly, the Commission would like to see much more rooftop or building-integrated solar photovoltaics or solar hot water heaters. Yet many countries have delayed promoting those investments. They rightly understood that buildings first need to become more *lower*-carbon buildings before they begin producing energy and become carbon-*negative* buildings.

The European Manufacturers of Expanded Polystyrene welcomes the European Commission's commitment to a Renovation Wave and the outline of its strategy shared in the roadmap published this May. This initiative is a great opportunity for scaling-up current renovation rates and EU's climate and

energy efficiency goals. We agree that increased renovation can be a key contributor to creating jobs and stimulating economic recovery in the context of the COVID-19 pandemic. We embrace the Commission's finding that buildings are also critical for making circularity work and its objective to implement the Renovation Wave in line with circular economy principles.

While EU and national policymakers are rightly focused on reducing the impact of the pandemic, many commentators have noted that climate change promises even bigger disruption and that the longer countries wait to begin reducing carbon emissions the harder and more expensive it will become to do so. Decarbonisation and energy efficiency require a transformative approach in the way we live, and the building sector plays a crucial role in this transition. In order not just to help jump-start Europe's stalled economies but invest in climate change mitigation and adaptation today, the EU needs to prioritise those investments that will make an immediate contribution towards its climate neutrality goals while also facilitating other goals such as greater recycling and use of recycled materials and increased installation of solar energy systems on renovated buildings.

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