

The contribution of energy efficient glazing to Paris objective in different EU building renovation scenarios

Cédric Janssens, Glass for Europe / Research Associate at Public Law Center - Université Libre de Bruxelles (ULB), Belgium

Panel

7. Make buildings policies great again

Keywords

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The commitment made in Paris calls on the EU to release a new strategy setting new levels of ambition for its GHG emissions reduction and define the contribution of its different sectors. The building sector is one of the sectors with the highest savings potential, and the distinct benefits of energy efficient buildings (e.g. economic, social and environmental) are often highlighted. To tap into this potential, a number of regulations, financial and fiscal incentives and other soft tools have been developed at all levels of governance, with mitigated outcome. While the building sector accounts for 40% of the European Union's (EU) energy consumption and 36% of its CO₂ emissions, the EU building stock continues ageing with a reduced number of new buildings, and low demolition and renovation rates.

This paper proposes to consider the impact of the renovation rates on the energy savings and CO₂ emissions reduction of one element of the building's envelope; i.e. the windows and in particular their glazing. Based on an assessment of the EU current building and window renovation rates and quantifications in a recent report commissioned by Glass for Europe to TNO (TNO 2019), this paper presents the quantities of energy and CO₂ which can be saved by 2030 and 2050 using adequate glazing depending on the building type and location. Four different scenarios are developed analysed for the entire EU-28: two scenarios assessing the maximum/theoretical savings potential of glazing (in 2030 and 2050) and the impact of doubling the EU building renovation rate between 2020 and 2030. Based on these findings, this paper will reflect on the current renovation trajectories and policies, and how can the reform of the EU climate policy help energy efficient glazing contribute to the Paris objective.