Towards Nearly Zero Energy Buildings in Europe: A Focus on Retrofit in Non-Residential Buildings

Abstract:
Buildings are the focus of European (EU) policies aimed at a sustainable and competitive low-carbon economy by 2020. Reducing energy consumption of existing buildings and achieving nearly zero energy buildings (NZEBs) are the core of the Energy Efficiency Directive (EED) and the recast of the Energy Performance of Building Directive (EPBD). To comply with these requirements, Member States have to adopt actions to exploit energy savings from the building sector. This paper describes the differences between deep, major and NZEB renovation and then it provides an overview of best practice policies and measures to target retrofit and investment related to non-residential buildings. Energy requirements defined by Member States for NZEB levels are reported comparing both new and existing residential and non-residential buildings. The paper shows how the attention given to refurbishment of NZEBs increased over the last decade, but the achievement of a comprehensive implementation of retrofit remains one of main challenges that Europe is facing.

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