

Of Buildings and Cars: a Tale of Decarbonisation

The building sector accounts for 36% of all EU emissions but constraints related to GHG-emissions are much looser and weaker in this sector than in the automotive sector. EdEn recommends that, in the context of the Green Deal and the renovation wave strategy, a new approach to the building sector based on the lessons learned from the automotive sector be adopted.

Today, consumers are acutely aware of the carbon footprint of their mobility habits and are increasingly taking into account environmental concerns when buying a car or travelling.

The European legislation has supported this heightened awareness with a strict framework for carbon reductions in the mobility sector. These constraints have resulted in significant CO2 emission reductions in new passenger cars over the last decade and in a strong development of electric vehicles.

A different approach based on mandatory energy-efficiency constraints and optional GHG-efficiency standards has been adopted in the building sector. This approach gives no incentive to assess and improve the carbon footprint of buildings¹. With the building sector accounting for more than a third of European GHG emissions, and a stagnant annual renovation rate of around 1% of the building stock, EdEn believes that decarbonisation should be put at the center of the European policy for buildings.

The upcoming **renovation wave strategy** is a key opportunity to adopt for the building sector the same approach that has been adopted for the automotive sector, and to focus on reducing carbon emissions.

Redefining what is an efficient building

Categorising cars according to their level of GHG-efficiency is a standard that today no one would challenge, but the same logic is not applied to the building sector.

According to the **Energy Performance of Buildings Directive (EPBD)**, buildings' efficiency is expressed in primary energy consumption, while taking into account the level of GHG emission associated with this consumption is only optional. But a low level of primary energy consumption does not have the same impact on climate when it relies on decarbonised or renewable sources and when it relies on fossil fuels. Considering the diversity of energies that can be used for space heating (electricity, liquid fuel, gas, etc.), it appears fully legitimate to assess buildings' performance through a **GHG-efficiency criterion**, as it is assessed for cars.

With climate neutrality now being a priority goal for the EU, the upcoming renovation wave should include a strong climate dimension in the EPBD.

Guiding the building sector towards climate neutrality

Car constructors are also required to ensure that their new vehicles' average emissions of CO2 do not exceed a certain threshold. This maximum threshold is progressively lowered every 5 years so as to guide the automotive sector's trajectory towards climate neutrality.

¹ Not only does this approach give no incentive to reduce the carbon footprint of buildings, but, because it is based on the primary energy concept that rules out decarbonised electricity from nuclear plants, it can actually promote carbon emissions!



The building sector is expected to reach climate neutrality by 2050 too, but no trajectory has been defined to lead the sector down to that goal. Reaching climate neutrality can only be the result of a progression over a span of several decades, which is why **milestones** for GHG emission reductions need to be set up as of today.

With buildings far exceeding the lifespan of cars, it appears necessary to define a roadmap for buildings' GHG emission reductions starting from 2020 if the sector is expected to reach climate neutrality by 2050. For this reason, we recommend each Member State be encouraged to set a progressively decreasing **limit for maximum GHG emissions** from new buildings so as to design a national trajectory towards climate neutrality for new buildings.

Generalising inspections for a higher renovation rate

Taking their car to a periodic inspection and making sure that it is up to the current technical standards is natural to all European citizens. As regards the inspection of buildings however, habits are very different. Periodic inspections of buildings only apply to a small portion of buildings with high capacity in terms of heating and cooling, which is not sufficient to initiate a global renovation wave in the EU building stock.

Periodic inspection of all buildings resulting in **energy and GHG performance certificates** being delivered every 10 years could significantly increase consumers' awareness of their housing's environmental impact. With constant evolution and improvement in heating technologies, these inspections would enable owners and tenants to see how their equipment compares to the current standards and available options.

Increased awareness would result in a higher rate of renovation - especially if renovation work is appropriately supported by public subsidies - which in turn would significantly accelerate the decarbonisation of the European building stock.

In view of the upcoming renovation wave strategy, EdEn has issued a strategy for decarbonising the building sector “[A more efficient and cleaner European building stock for a green recovery](#)”.

About EdEn: Created in 2011, EdEn (Equilibre des Energies) is a transversal platform gathering a broad range of actors from the energy, construction and mobility sectors with a common goal: **making a better energy society.**

More information: <https://www.equilibredesenergies.org/en>