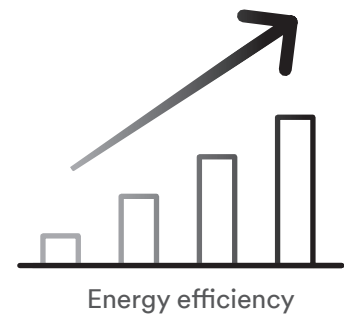
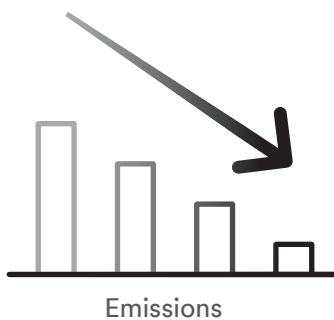


Europe starts „Renovation Wave“: Clear the renovation backlog in old buildings

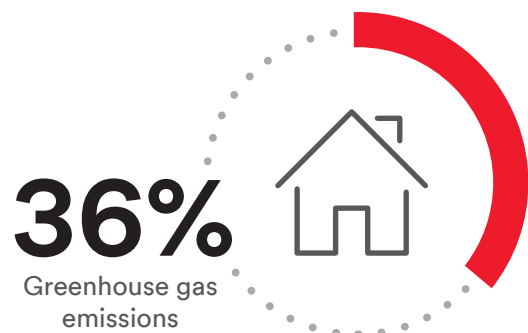
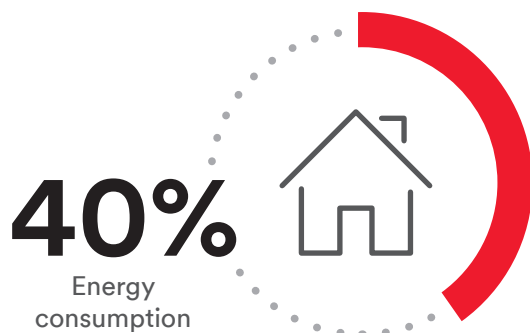


Reduce emissions, increase energy efficiency in buildings, achieve climate targets!

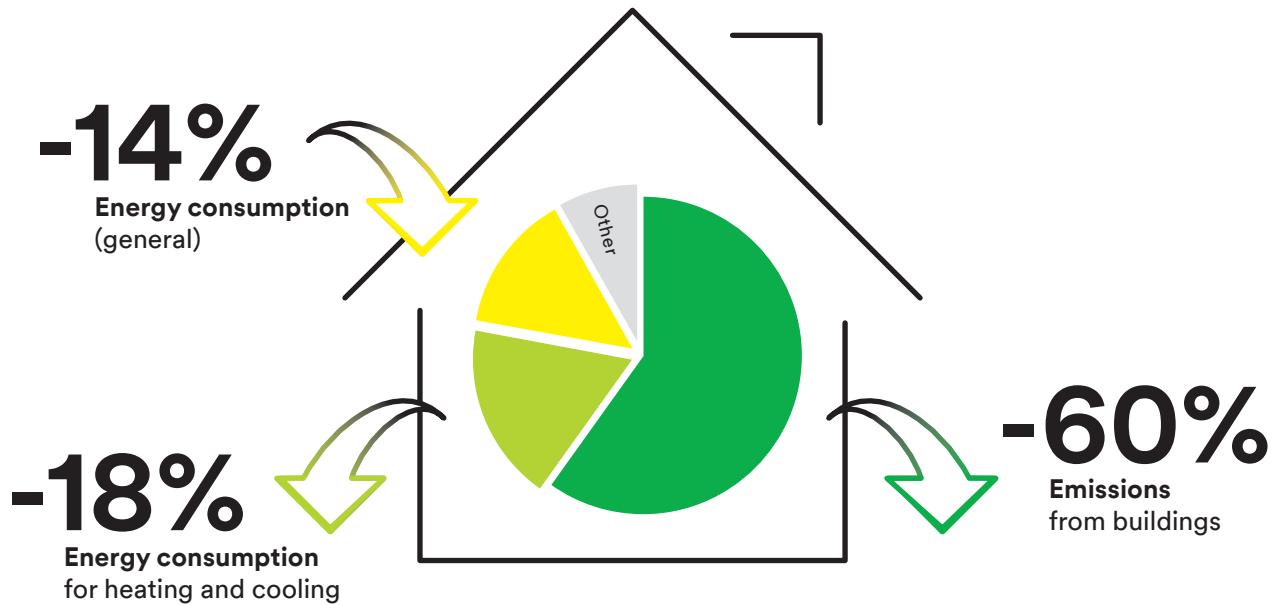
More than 75 percent of the European building stock is considered to be in great need of energy renovation. However, too little is being modernized: the current rate of renovation of one percent of buildings per year must be significantly increased in order to achieve the EU's climate targets. The EU-wide "Renovation Wave" initiative is intended to help resolve the renovation backlog in old buildings.

The numbers speak for themselves:

Buildings account for 40 percent of energy consumption in the EU and 36 percent of the greenhouse gas emissions caused by energy consumption. The Federal Environment Ministry cites similar values for the building sector in Germany. According to the Building Energy Act, which came into force on November 1, 2020, new buildings must adhere to high standards of thermal insulation and energy efficiency. Old buildings, on the other hand, have a significant pent-up demand. A considerable proportion of heating energy is lost unhindered to the outside by uninsulated buildings, the energy requirement and the associated emissions are unnecessarily high.



By 2030 – Greenhouse gas emissions must drop by at least 55 percent



Great pent-up demand in the building stock

Across Europe, **greenhouse gas emissions must drop by at least 55 percent by 2030**, and Europe aims to be climate-neutral by 2050. According to EU calculations for the first target to be attainable by 2030 at all, **the emissions from buildings must be reduced by 60 percent, their energy consumption by 14 percent and the energy consumption for heating and cooling by 18 percent**. The energy requirement of today's new buildings is around 50 percent lower than of buildings that were built more than 20 years ago. But the building stock in the EU-wide average is old: 85 percent of the buildings were built more than 20 years ago, 85 to 95 percent of them will still exist in 2050.

More speed in energetic renovation

In order to achieve the EU's climate targets, the building sector must therefore be proactive. This is the aim of the European Commission's "Renovation Wave" strategy, which was published on October 14, 2020. With the package of measures the renovation rate of currently only one percent of the buildings p.a. should at least double within the next ten years. According to figures from the EU Commission, 35 million buildings could be renovated by 2030, creating up to 160,000 additional jobs in the construction industry.

Only 1%: renovation rate too low

According to the German energy agency (dena), the annual renovation rate in Germany currently stands at one percent. There are 18.9 million residential buildings nationwide, 15.7 million of which are single and two-family houses - according to dena, the energy consumption per square meter is particularly high here. Buildings from the 1950s to 1970s in particular, which were built before the first thermal insulation ordinance, usually have a very poor energy standard. Effective building insulation and modern heating technology should form the central building blocks for an effective energetic renovation.



Three focal points of the “Renovation Wave”

The core measures captured in the Europe-wide “Renovation Wave” focus on three areas:

- 1 **Decarbonisation** of heating and cooling
- 2 **Combating energy poverty** and taking measures for buildings with the lowest energy efficiency
- 3 **Sustainable renovation of public buildings** such as schools, hospitals, administration buildings

New minimum standards planned for buildings

Specifically, the European Commission is planning new minimum standards for overall energy efficiency, more financial support and technical assistance in order to favor financing through “green” mortgages and to promote the use of renewable energies for heating and cooling. Stricter regulations, standards and information on the energy performance of buildings are planned to make renovations more attractive to the public and private sectors.

Higher requirements for the public sector

The package of measures also includes the gradual introduction of binding minimum standards for existing buildings, updated regulations for energy efficiency certificates and an expansion of renovation requirements for the public sector. At the same time, the market for sustainable building products is to be promoted, for example with the integration of new materials and more recycling. Another point: almost 34 million Europeans cannot afford to heat their homes. Measures to increase energy efficiency therefore also serve to combat energy poverty.

New ways of thermal insulation

3M products can contribute to innovative and sustainable building materials in many ways. One example of this are new insulation systems. To provide thermal insulation for building exteriors that are not or insufficiently insulated is of central importance in renovation. However, conventional insulation presents some challenges: recycling, fire protection, optics and flexibility, as well as energy consumption in production are often not compatible. Breaking new ground in these aspects is a thermal insulation called ecosphere by maxit®.

Its highlight is the innovative combination of mortar and glass: Glass Bubbles from 3M, microscopic and highly heat-insulating hollow glass spheres, are bound in a dry mortar. The purely mineral and resource-saving building material can simply be sprayed onto the facade and has a particularly high insulating effect. In use, this is characterized by high productivity and low weight combined with high stability and strength. It is non-flammable and can be reused after use in the sense of a closed cycle economy. By avoiding the utilization of building sand, a raw material that is dwindling worldwide, valuable resources are also saved.



Advantages also in processing

Further advantages enable particularly efficient and time-saving processing. The use of a silo simplifies construction site logistics, the applicability by spraying accelerates the placement of the heat-insulating layer. Another advantage: the fact that it can also be used as interior insulation enables the energy-efficient renovation of listed buildings whose facade must not be altered. Work is already underway on the development of processing methods that will allow robots to apply the insulation in the future - an important aspect in view of the shortage of skilled workers in the construction industry.

New European Bauhaus planned

Ecosphere is already commercialized and a tried and tested insulation system for more efficiency in energy renovation. Other technologies will certainly follow in the coming years. The EU also wants to promote innovative strength. As part of the “Renovation Wave”, a new European Bauhaus is planned. In the tradition of the classic Bauhaus in the early 20th century, architecture, craftsmanship and art should work together in an interdisciplinary manner in order to identify pioneering solutions for everyday life. An advisory committee with external experts from science, architecture, design, art, planning and civil society is to head the interdisciplinary project. By 2022, a network of five founding Bauhaus buildings will be created in various EU countries. The new “Bauhaus 2.0” is expected to have a global appeal similar to that of the historical model.

Sources: European Commission a Renovation Wave for Europe, 2020;
JRC report “Achieving the cost-effective energy transformation of Europe’s buildings”, 2020;
IRP, Resource Efficiency and Climate Change, 2020, and UN Environment Emissions Gap Report ;
dena-Gebäudereport, 2019