

BUILDING EFFICIENCY – DRIVER FOR SUSTAINABLE DEVELOPMENT

SUSTAINABILITY

It is one of the most used words in European policy today. We all agree it is important, but how will we balance **social, economic** and **environmental objectives** when making decisions?
Is there a way to meet our needs without compromising the needs of future generations?



WHAT IS THE GOAL?

Reducing EU GHG emissions by
88% - 91%
By 2050

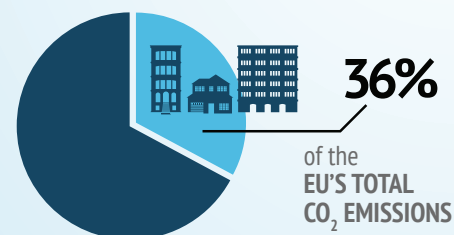


Reducing Europe's energy
dependency

We import
€420_{BN} or **53%**
worth of energy each year of all the energy we use

REDUCING EMISSIONS

Buildings account for about

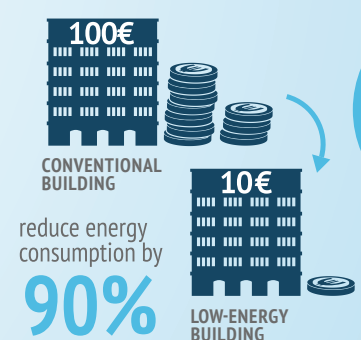


CREATING EMPLOYMENT

19 JOBS

Per **€1m** of investment

REDUCING BILLS



9.8%
OF HOUSEHOLDS
IN THE EU
ARE CONSIDERED
FUEL POOR

HOW CAN BUILDING RENOVATION CONTRIBUTE TO SUSTAINABLE DEVELOPMENT?

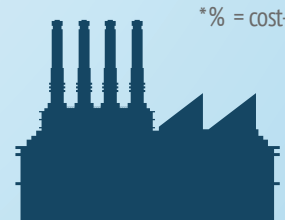


61%*



41%*

or



26%*

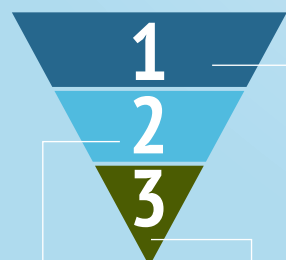
*% = cost-effective savings potential

If we want to save energy, **buildings** are a great place to start.

The most cost-effective savings potentials by 2030, more than **transport** or **industry**, the other two big energy users.

STARTING POINT?

Trias energetica:
the most sustainable
energy is saved energy



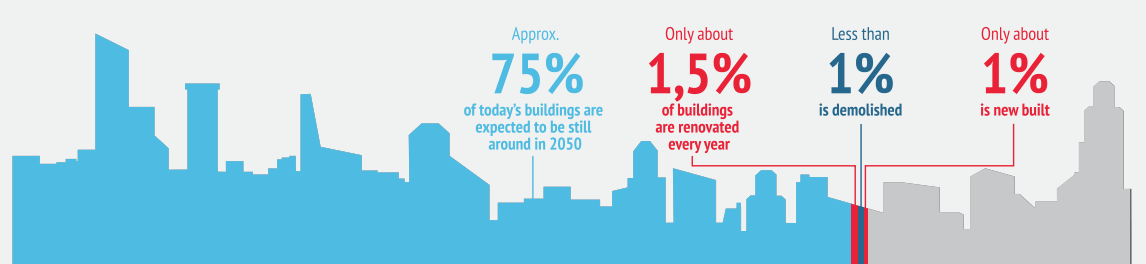
1 Reduce the demand for energy by avoiding heat losses and implementing energy-saving measures.

2 Use sustainable sources of energy instead of finite fossil fuels.

3 Produce and use fossil energy as efficiently as possible

INSULATION IS ONE OF THE SIMPLEST AND MOST COST EFFECTIVE WAYS TO IMPROVE THE ENERGY EFFICIENCY OF BUILDINGS, WHETHER THEY ARE OLD OR NEW.

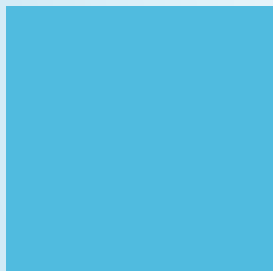
THE POTENTIAL
IS **IMPRESSIVE**
EUROPE
has **210m** buildings



POLYURETHANE INSULATION IS THE RIGHT TOOL FOR THE JOB

IT SAVES ENERGY

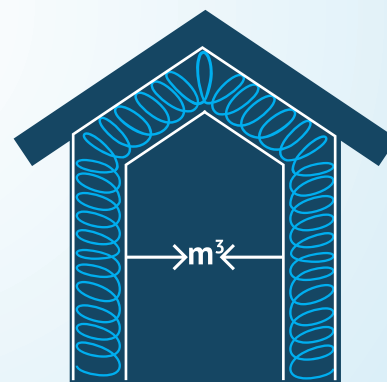
Energy used to produce the insulation material



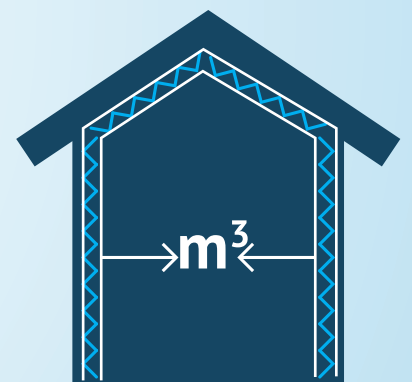
Energy saved by using insulation

Additional insulation will increase the embodied energy of buildings, but this is more than largely offset by use-phase savings.

IT SAVES SPACE & RESOURCES



SOME OTHER MATERIALS



PU

At an equal thickness, PU insulation is the **energy savings champion**. This is especially important in renovated buildings. **PU insulation does more with less**. Less material means less resources.

EUROPE IS LEADING THE WAY

TOWARDS NZEBs



The EU cannot achieve its climate goals unless the energy consumption of buildings is cut by 80% by 2050.

A key element of this policy is that all new buildings must have nearly zero energy demand from 2021 onwards.



EPBD

The Energy Performance of Buildings Directive introduced several innovative tools:

- Energy performance certificates
- Pathway towards nZEBs
- Concept of cost-optimality
- Certain renovation requirements
- Inspection schemes



-1,5% per year

EED

The Energy Efficiency Directive added further important requirements:

- National building renovation roadmaps
- 3% renovation rate for central government buildings
- 1.5% energy savings obligation for energy suppliers

BUT MORE NEEDS TO BE DONE

To reduce the energy demand of EU buildings by 80% by 2050 an **annual renovation rate of 3%** is required.



Member States must implement **long-term strategies** for the renovation of the building stock.



EU legislation needs to create a **coherent framework** for renovation.



CONCLUSIONS

1

Energy efficient buildings are a major contributor to achieving the EU's long-term climate and energy goals.

2

Tackling the savings potential of existing buildings is paramount.

3

PU is best placed to respond to these challenges as it saves more energy for every centimeter of insulation.