

European Union climate policy

By 2030, the EU will reduce greenhouse gas emissions by at least

55%

By 2050,

the EU will become climate neutral

The package of provisions regarding climate, energy and transport is a tool for achieving these objectives

55% ready

Energy Efficiency First

Prioritising energy efficiency is a horizontal principle of the EU energy and climate policy. It involves taking into account the potential benefits of energy efficiency improvements in all decisions concerning the energy system development.



Potential for electricity demand reduction in the residential and non-residential sectors:

The cost of reducing electricity demand by **1 TWh** is **72%** lower than the cost of generating the same amount of energy from burning coal



The cost of reducing the demand for electricity by **1 TWh** is **68%** lower than the cost of generating the same amount of energy from RES



Potential to reduce fuel demand in the residential sector through improved energy performance of buildings and installation of zero-emission heat sources

The cost of improving energy efficiency and achieving savings of **1 GJ** of thermal energy is **51%** lower than producing **1 GJ** from burning coal



The cost of improving energy efficiency and achieving savings of **1 GJ** of thermal energy is **49%** lower than producing 1GJ using a heat pump without a prior energy retrofit of the building



Potential to reduce energy demand in industrial processes

The cost of achieving energy savings of **1 GJ** in industry as a result of improving energy efficiency is **56%** lower than producing the same amount of energy from burning coal.



The cost of saving **1 GJ** in industry as a result of energy efficiency improvements is **61%** lower than the generation of the same amount of energy from RES.



Costs of not improving efficiency

The National Energy and Climate Plan assumes that by improving energy efficiency in industry and buildings, energy demand will be reduced by

5,3 Mtoe
(222 PJ).

Failure to achieve this goal will entail additional costs, which by 2030 will amount to

11 PLN billion
annually.

The cost of heating houses with coal will increase significantly in the coming years

Using coal in a typical Polish household in 2030 will generate an annual cost of over

5,5 PLN thousand, of which over **2** PLN thousand will be allocated to emission charges.



Recommendations

- Public policy in the area of energy efficiency should comprehensively take into consideration the costs and benefits of energy efficiency improvement in the medium and long term.
- Shaping support instruments and regulatory tools, such as efficiency standards, one should take into consideration medium- and long-term goals, i.e. the need to reduce the demand for energy up to 2030 in the entire EU by at least 9% as compared to 2020 forecasts, as well as the goal of climate neutrality which the European Union has undertaken to achieve by mid-century at the latest.
- Financial support instruments facilitating investment in the improvement of energetic efficiency are required: subsidies in the case of households and repayable financial instruments in the case of companies with such companies having also access to subsidies if they implement innovative solutions.
- Support instruments should promote complex and deep energy upgrades and other activities resulting in a significant reduction of energy demand, as they are most cost-effective in the long term.
- Support instruments must be accompanied by clear regulatory tools, i.e. increasingly higher and obligatory energy efficiency standards.
- Furthermore, activities raising awareness regarding available solutions and best practices, available support mechanisms, the economic calculus of investment into energy efficiency improvement, and EU goals and policies concerning energy efficiency are necessary.
- Utilisation of the potential of energy efficiency improvement in the economy requires qualified specialists, hence, it should also be a goal of the public policy to ensure an appropriate number of workers with required skills. Competencies related to energy efficiency may constitute a promising retraining direction for people leaving employment in fossil fuels sectors.