



ENERGETIC EFFICIENCY

is the amount of energy consumed related to the obtained effect value of the given object, technical equipment or installations in typical operating conditions. Her improvement significantly reduces the consumption of energy resources (oil, gas, coal), and thus also dependence on their import. Thanks to it, individuals and companies pay lower energy bills a society is experiencing an improvement in the quality of life.

* According to the Efficient Energy Foundation, improving energy efficiency can give Poland:

- reduction of annual CO2 emissions by 57.5 million, or almost 15% of total gas emissions greenhouse in Poland
- reduction of energy costs at final recipients by PLN 35.9 billion per year
- reduction of annual electricity generation costs from PLN 59.1 billion to 48.5 billion
- increase in the number of jobs in the energy sector by 298 thousand full-time employees in 2011-2020.

Fun fact : Save energy five times by replacing a traditional light bulb.

Energy saving by replacing a traditional incandescent lamp with a compact fluorescent lamp or incandescent bulb LEDs during 40,000 hours of use (i.e. approx. 30 years) (according to WWF and own calculations)

	LIGHT BULB	COMPACT TUBE	LED
Life time (h)	1000	10000	40000
Power (W) with the same quality of light	100 W	25 W	13 W
Cost of purchase	1,2 PLN	25 PLN	110 PLN
Number of lamps	40	4	1
Total purchase cost	48 PLN	100 PLN	110 PLN



Energy consumption (kWh)	4000	1000	520
Energy cost (0.55 gr / kWh)	2200 PLN	550 PLN	286 PLN
Total cost of ownership	2248 PLN	650 PLN	396 PLN

In Poland, the greatest potential for improving energy efficiency is in the construction sector.

So-called passive construction.

Passive construction is one that provides high thermal comfort with extremely low heat energy demand. It amounts to 15 kWh per year, i.e. 1.5 liters of heating oil or 1.5 m³ of natural gas per 1 m². Meanwhile, buildings from before 1966 consume 240 -350 kWh (i.e. 16 - 23 times more than passive houses) and apartments from 1993 - 1997, 120 - 160 kWh (i.e. 8 - 10 times more). Even buildings considered energy-saving in Poland consume 5 times more energy than passive houses. Passive houses create the opportunity for enormous energy savings, and thus a significant reduction in both energy expenditure and environmental burden.