

Energy efficient buildings in Poland, opportunities and challenges.

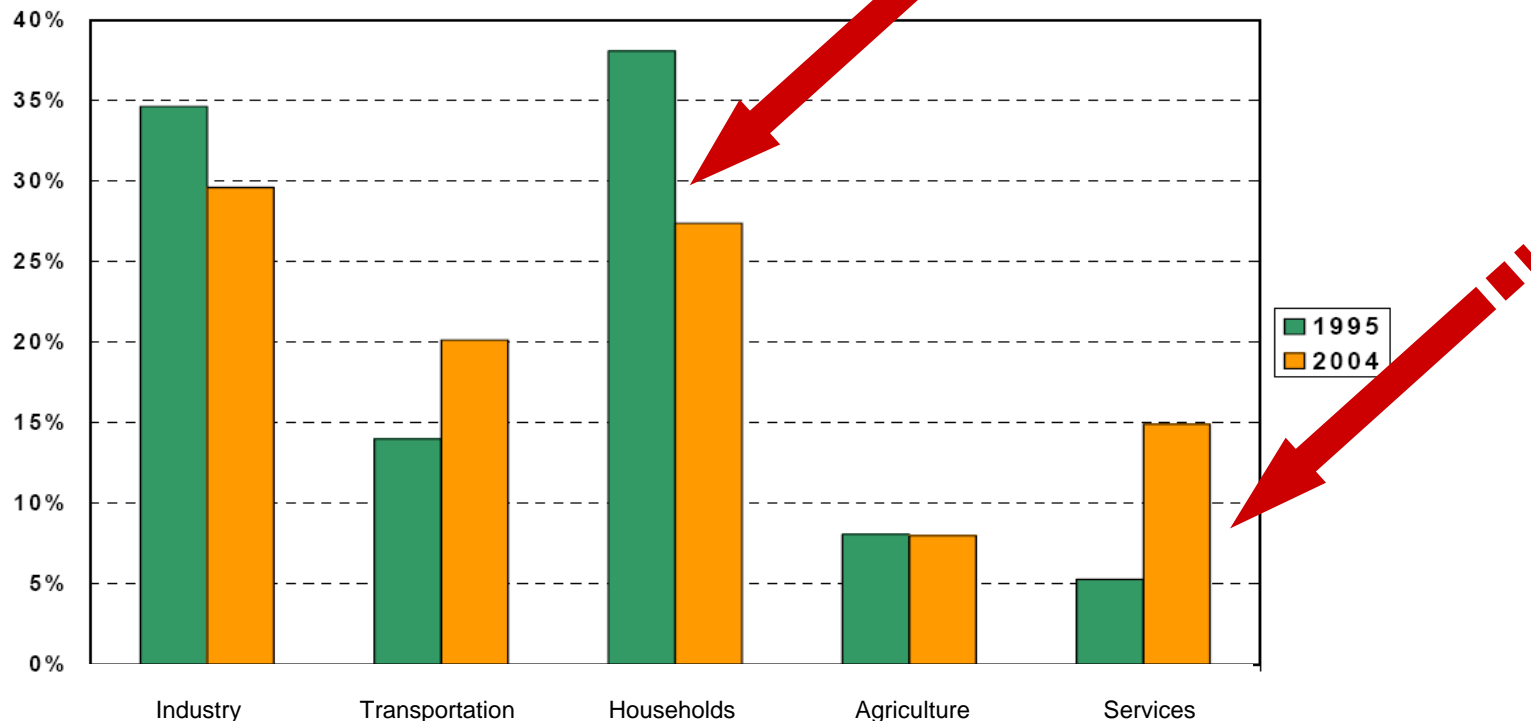
09.12.2008

Maria Dreger
Rockwool Polska Sp. z o.o.

Energy consumption in Poland in different sectors.

82% of Poles do not realise that buildings are responsible for the highest level of energy consumption"

Report: „Poles about energy savings"



Energy consumption in Polish households

Only 4 in 100 Poles know that around 70% of energy is used in households for heating.

Report „Poles about energy savings”

	1993	2002
In general %	100,0	100,0
Heating	73,1	71,2
Water heating	14,9	15,1
Cooking	7,1	6,6
Lighting	1,6	2,3
Electrical equipment	3,3	4,5

Energy efficient buildings – new and renovated

What can be gained – building energy efficient buildings and thermo renovating old ones?

Can we afford this?

- ❑ **Building energy efficient buildings.**

Cost of getting the energy efficient standard of new built flat with living area ca 50 m² is equivalent to the flat cost of 0.25 to 1.0 m².

- ❑ **Existing buildings are the biggest saving potential. Each renovation is a chance for the (low cost) thermo modernisation.**

In the cube house from the 70-ties the heating cost can be lower by several hundred PLN per month.

Benefits of thermo modernisation

What can we gain - in a country by profitable thermo modernisation?

Can we afford the desist?

- ❑ Thermo modernisation can effect in savings of ca 20 mld PLN;
- ❑ Economically profitable thermo modernisation on a country scale: saving of ca 10 mln tonnes of coal per year;
- ❑ Limitation in CO2 emission of ca 34 mln tonnes per year, which gives around 15% of Polish assignments in EU ETS;
- ❑ Clean air – healthy living;
- ❑ Liquidation of social problem – not enough heated flats in Poland. This is due to low energy standards in buildings and too high heating costs.

Regulations vs. energy efficiency

Introduction of EPBD

Directive on Energy Performance of Buildings, will be implemented in Poland as from 1st January 2009

Effective tool for energy saving improvements available soon

or still

Untapped potential and ... challenge for the future?

Polish regulations

New Polish requirements compared to the previous ones and compared to Danish requirements.

Buildings from	Rate of energy consumption for heating E [kWh/m ² a]
before 1966	240 – 350
1967 – 1985	240 - 280
1985 - 1992	160 - 200
1993 – 1997	120 - 160
after 1998	90 - 120
Poland from 2009 - WT 2008	ca 55 - 120
Denmark – at present	55 - 35 - 25

Technical conditions

Requirements – technical conditions WT 2008

Holistic approach - TRIAS ENERGETICA

1. Starting with limiting energy loss and minimizing the energy demands.
2. The required energy amount to be used from renewable energy.
3. If it is against the economy – the energy can be used from the natural sources.

Requirements' level should consider economy, profitability / building lifetime / interest of user and society.

Requirements – complementary, not exchangeable.

Methodology

Are the certificates handy for users:

- available,
- clear,
- obvious ?

„Energy savings” formal and actual.

Example:

Energy-intensive building from 80-ties after changing the energy source from straw briquettes to gas can comply with required standard ;-(

Energy savings for future

Energy efficiency in buildings are our chance for the future.

It is important to use the positive examples and available solution and acting in comprehensive way:

- regulations,
- encouragements ,
- information.

More information on:

www.rockwool.pl / www.rockwool.com

www.6paliwo.pl / www.6fuel.pl

Thank you.

Maria Dreger

maria.dreger@rockwool.pl