

EU experience in implementing measures to improve energy efficiency in buildings

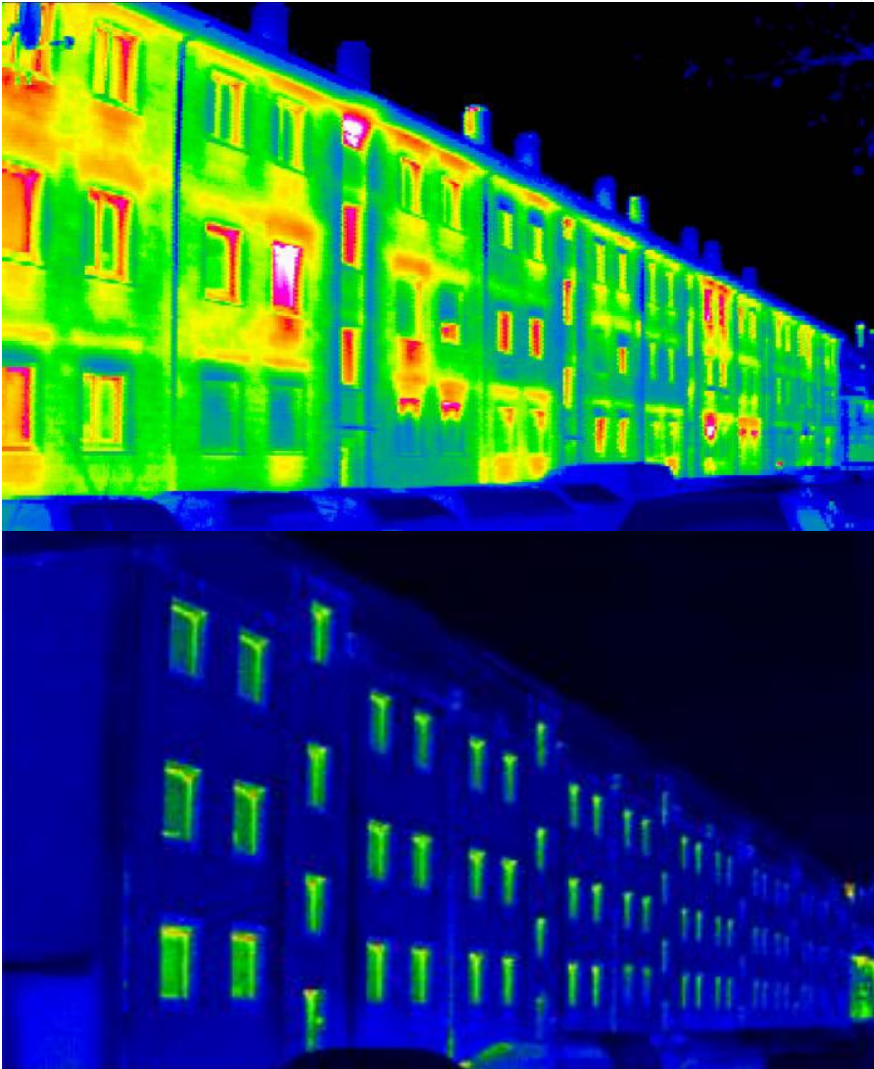
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European Commission

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Buildings consume ca.40% of primary energy in the EU (similar in Ukraine)

Some 70% of that is for heating/cooling, 12-15% for hot water)

Reducing wastage of thermal energy in buildings can make a huge impact on energy security/ energy independence

Influence of individual metering on heat consumption

Not metered building



Metered building



insulated

929 GJ

not insulated

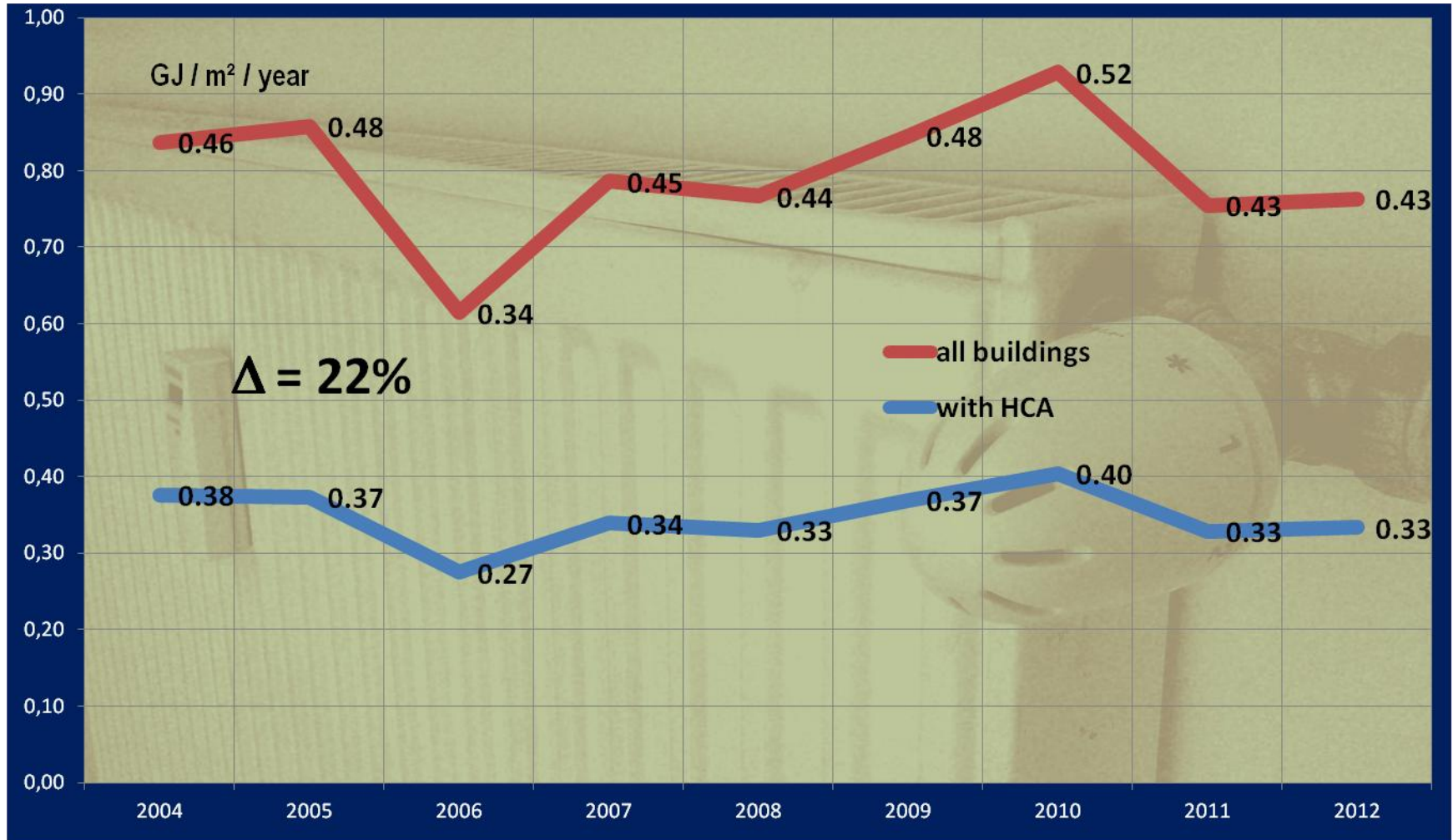
771 GJ

average heat consumption
2012/2013

- 22%!!!

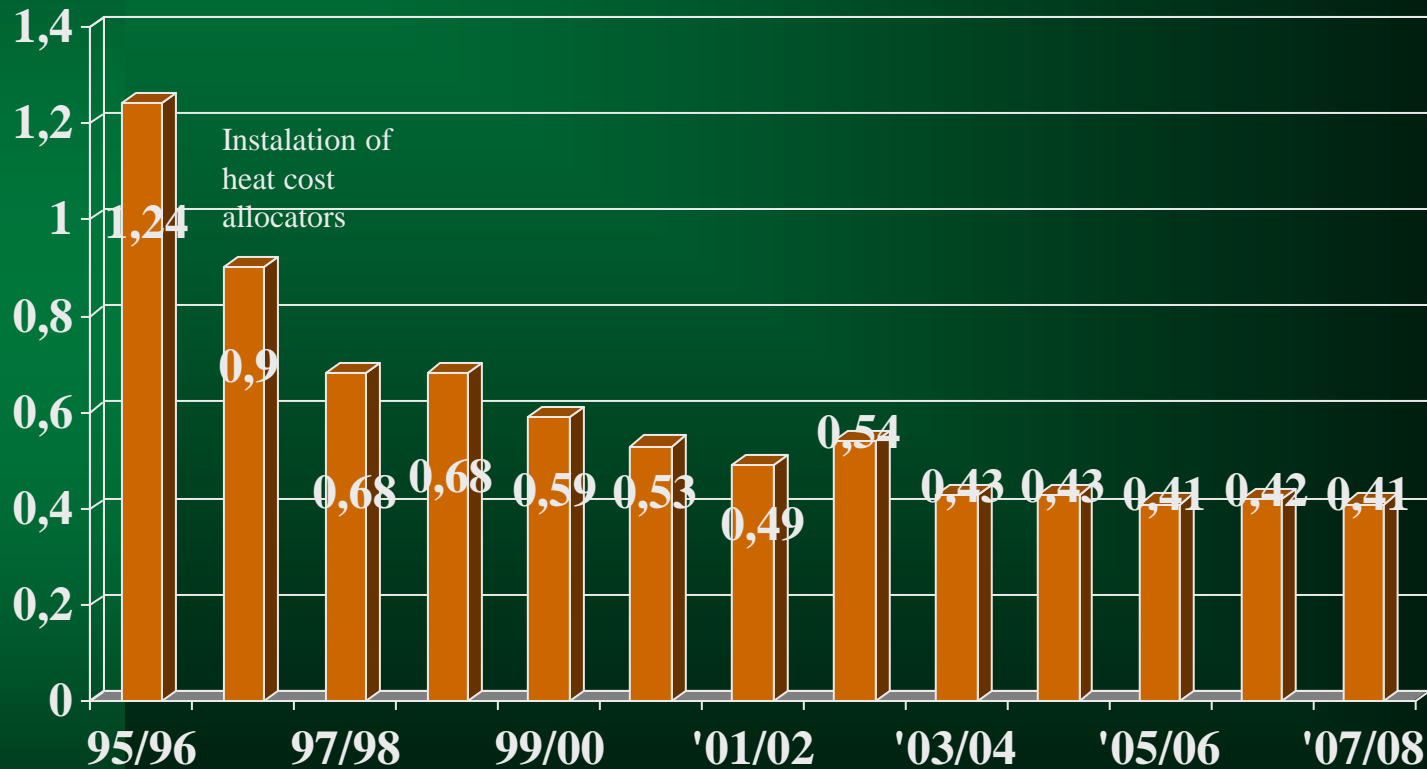


Northern Poland : 30 buildings ,36.000 m²





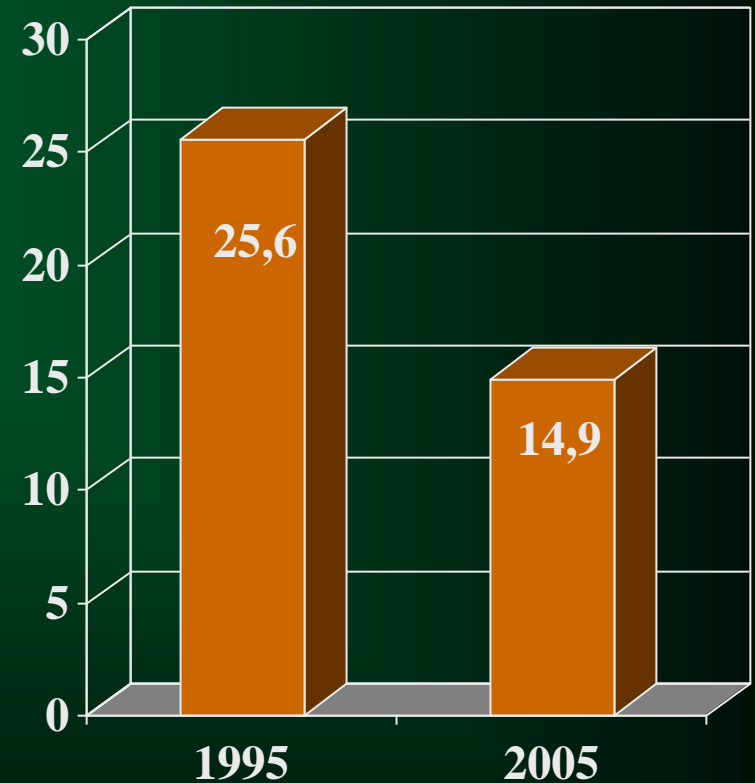
Average heat consumption (Kraków, Poland) Housing cooperative - Prądnik [GJ/m²/year]





Reduction of power [MW] – Kraków, Poland (<<OSBB>> Prądnik)

- ◆ Due to insulation of the buildings, instalation of the heat cost allocators and replacement of the windows, the demand for heating capacity was reduced to 14,9 MW
- ◆ **Lesson learnt: order of making investments matters; starting with central heat meter for the building (where not done yet), basic thermal regulation (thermostats) and individual meters/ heat cost allocators**



Why metering & billing of heat?

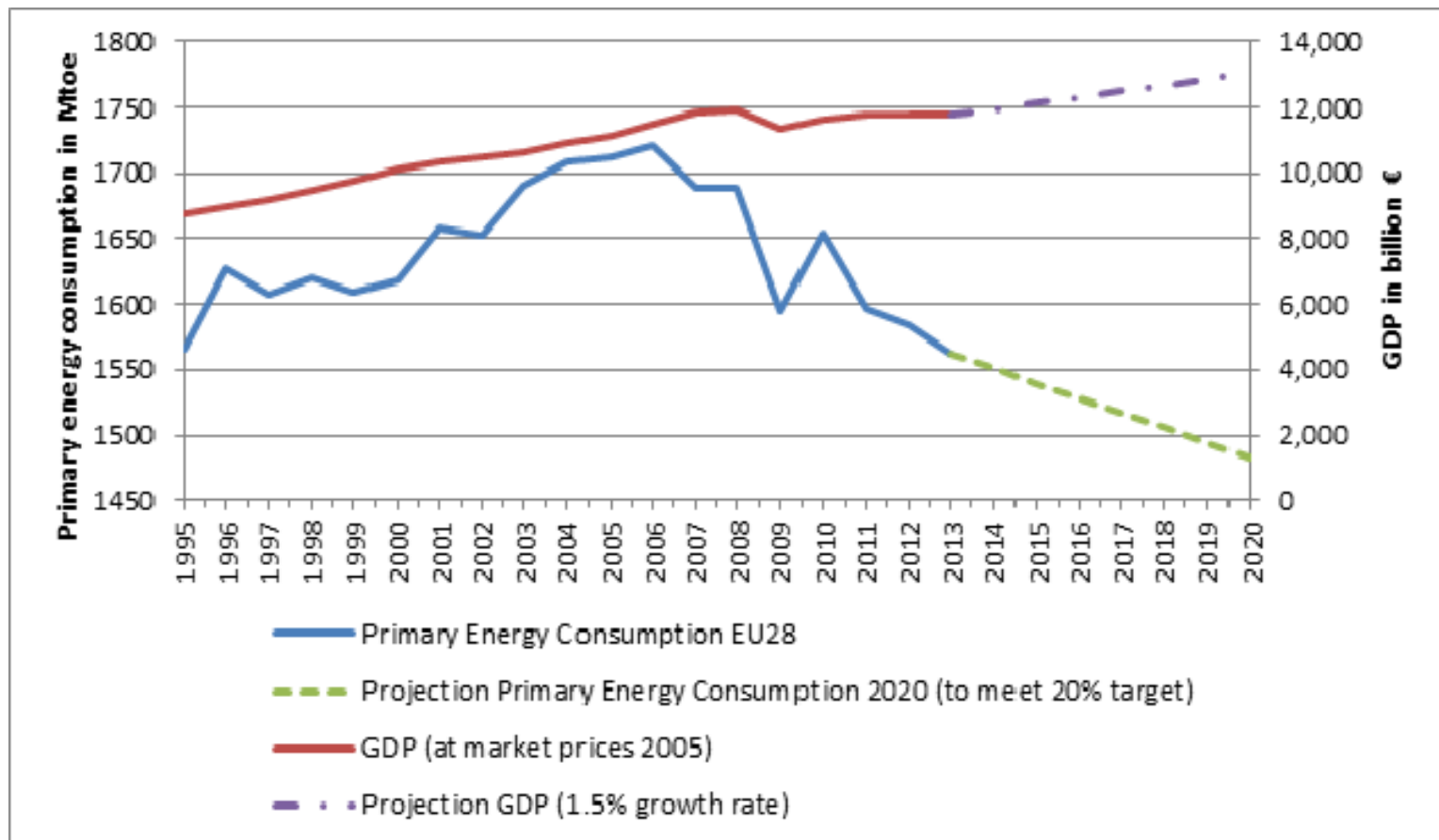


- Cheap yet very powerful measure to incentivise consumers to save energy
- Bring more **transparency to citizens**; give chance to verify the bill
- Helps get more from other measures (e.g. insulation of walls, replacing boilers, etc)
- Meters do not automatically save energy. It is information from individual metering and **billing based on actual consumption** that gives incentive to consumers to save energy (-30%)
- Metering of heat requires introduction of basic thermal control - **thermostats for radiators, balancing valves** – also for better comfort of living, health)
- Introduction of clear **law on metering and billing of heat crucial for large-scale deployment**





Energy efficiency policy doing its job



Legal framework in the EU

*Energy Performance of Buildings Directive
2010/31/EU (EPBD)*

Energy Efficiency Directive 2012/27/EU (EED)

Directive on renewable energy sources (2009/28/EC)

*Directives on ecodesign and energy labelling
(2009/125/EC and 2010/30/EU)*

Note: In practice, vast majority of actual implementation takes place at a local level (initiatives must come bottom-up)

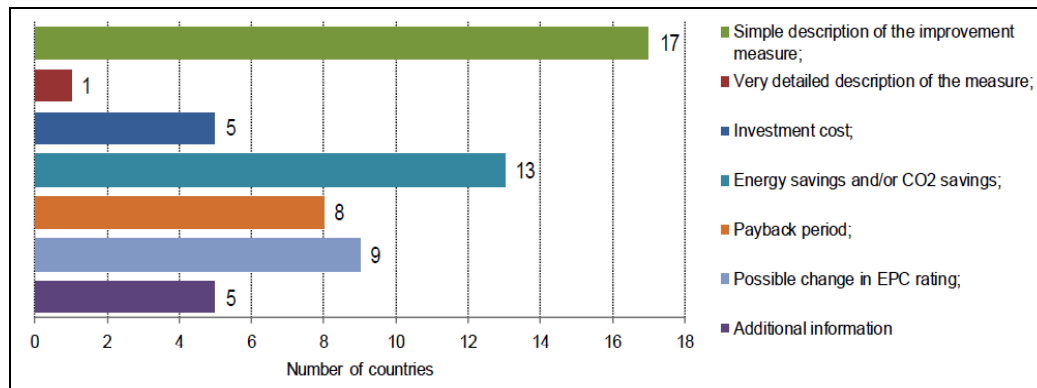


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Certification

National or regional central databases of Energy Performance Certificates enable the implementation of control mechanisms which are necessary to prevent fraud and strengthen the trust in the certificate.

The effective use of an Energy Performance Certificate in advertisements and as a supporting tool for financing is very important to increase the demand for energy efficient buildings on the market.

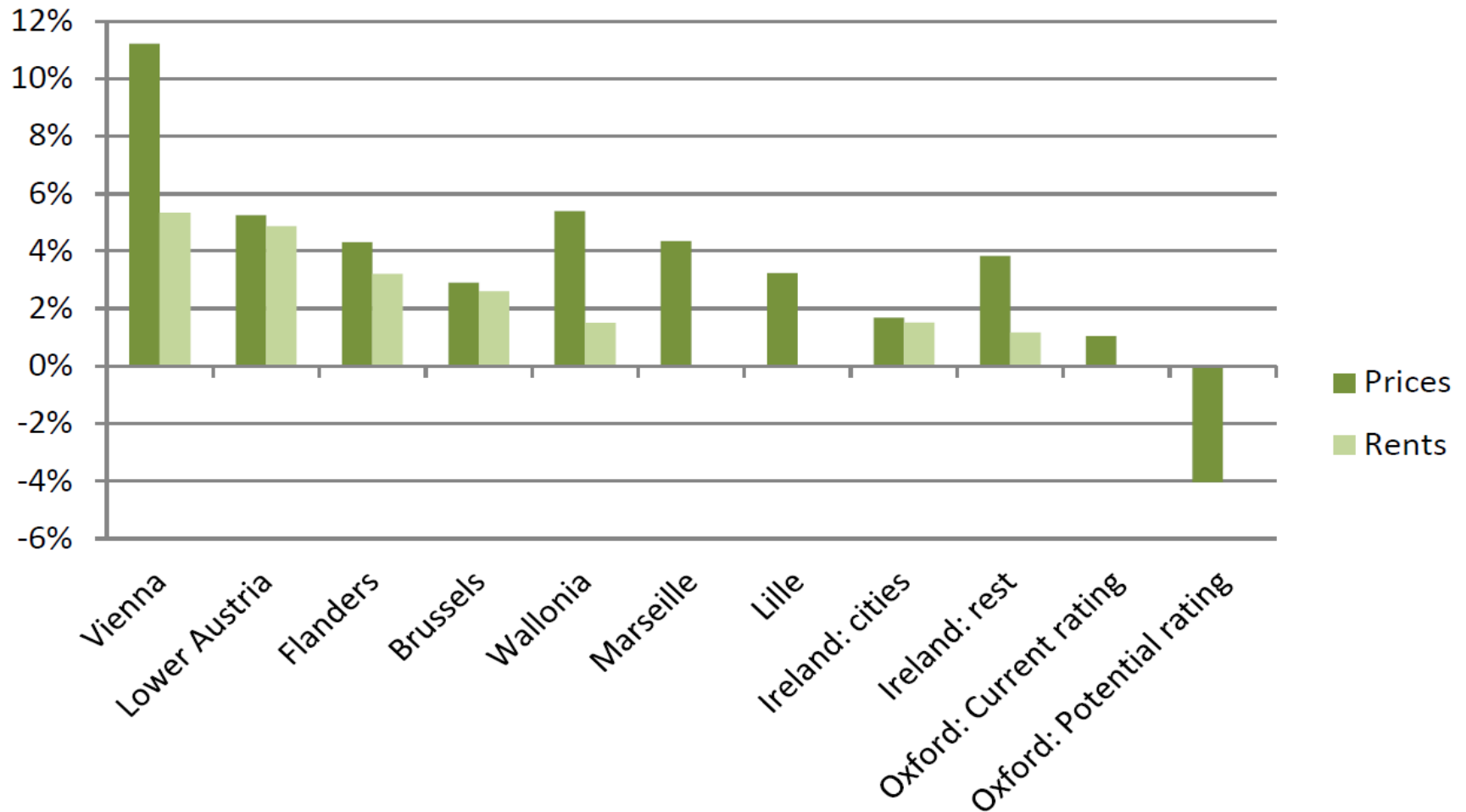


Monitoring of the implementation of recommendations is crucial to keep track on the actual improvements in building energy performance, especially in the building stock.

A database-centred approach with standard lists of recommendations is considered useful, but most Member States are still at the beginning and little experience is available.

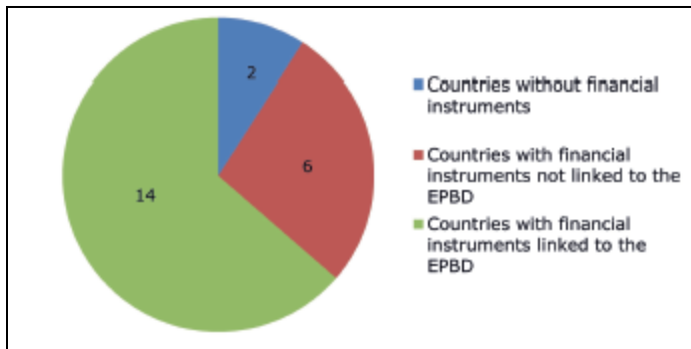


Effect of one-letter or equivalent improvement in EPC rating across a selection of European property markets (see also notes in the main report)

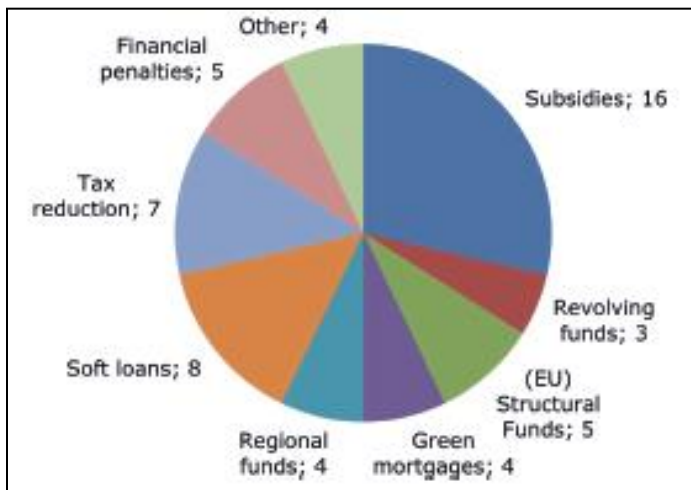




Support Measures for Energy Efficiency in Buildings



The effectiveness of incentives depends on: having a clear target group, design and administration of the instrument, accompanying actions (e.g., information), and particularly on having available matching capital for building owners to invest.



The most common role of the Energy Performance Certificate (EPC) is to verify the energy savings from implementing specific measures. The EPC is not always linked to the EPC improvement class.

Grants are the most popular scheme, but different kinds of loans and tax reliefs appear to be becoming more important. Detailed exchange of experiences with different schemes would be valuable.



Дякую за увагу!
Спасибо за внимание!

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