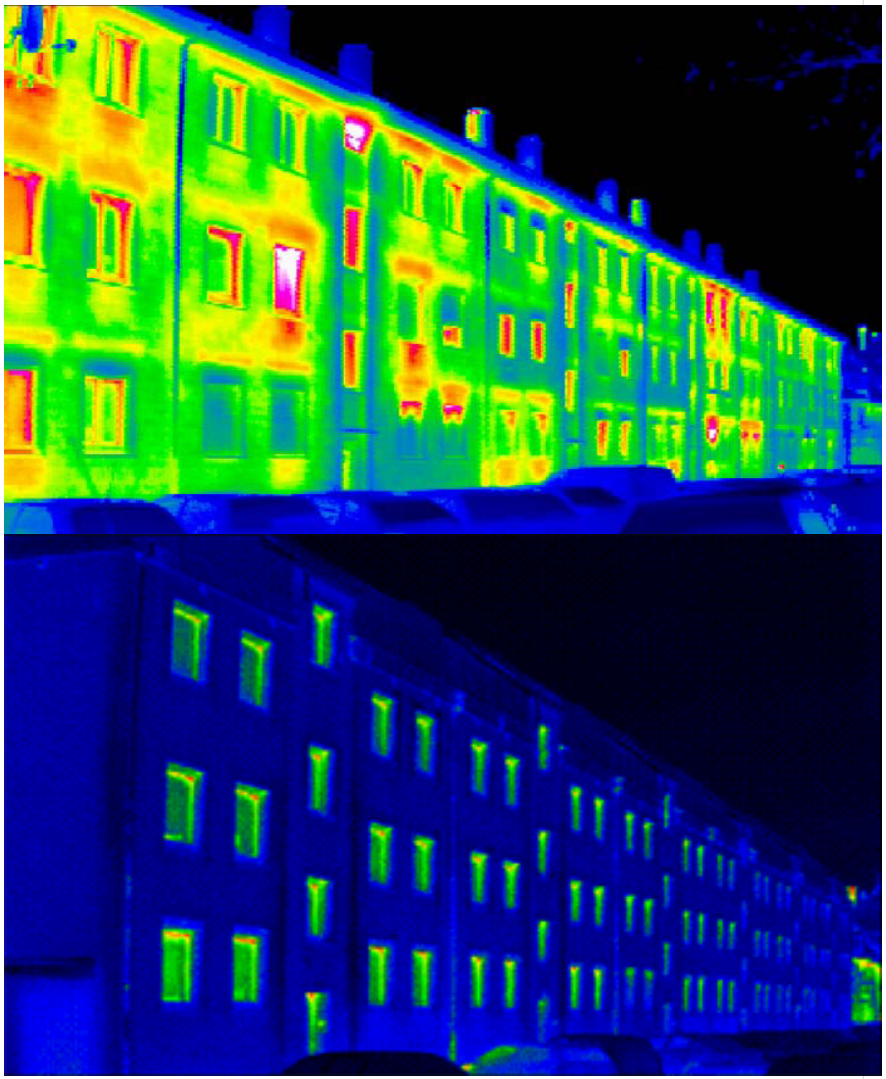


Capturing energy savings potential in buildings- relevance of the EPBD

ECEEE Seminar
19 November 2014
Brussels

Paula Rey García
Directorate-General for Energy
Energy efficiency in buildings

Legal framework

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)

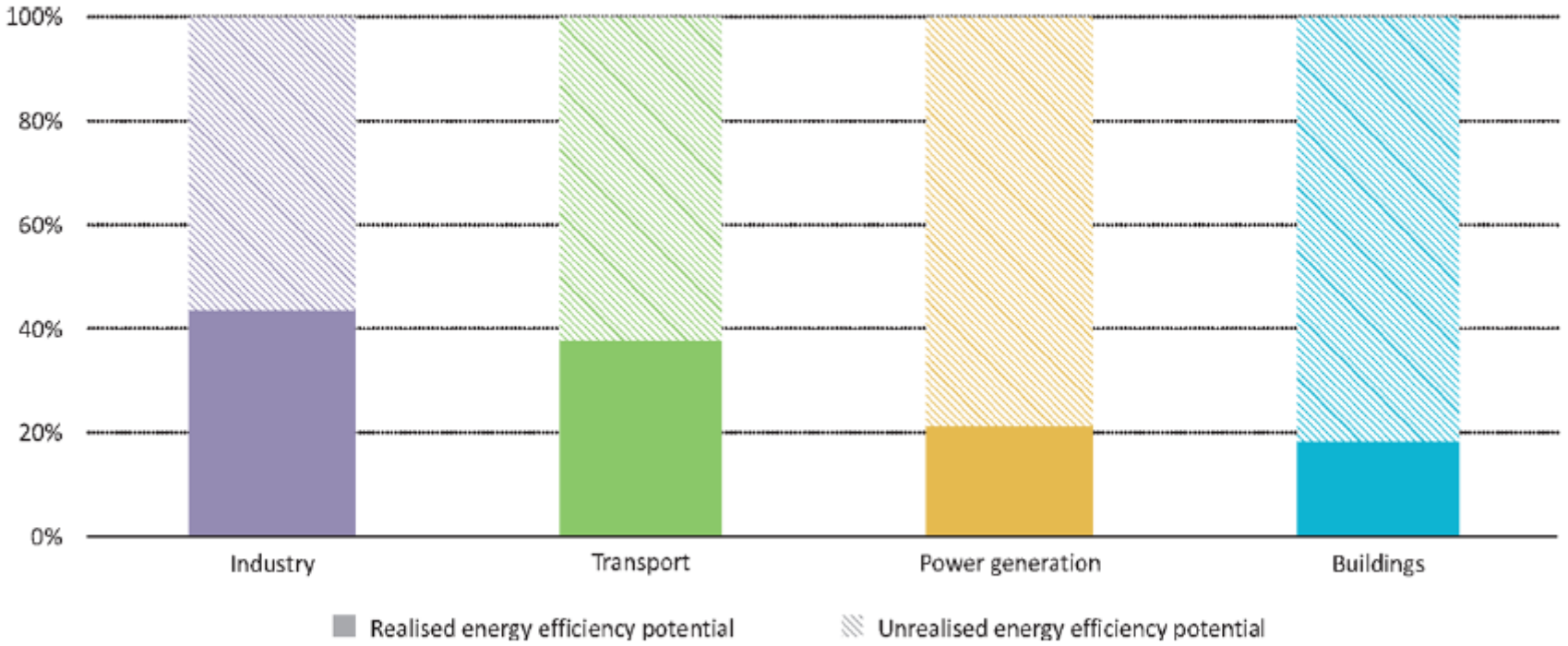
EPBD

Energy performance approach:

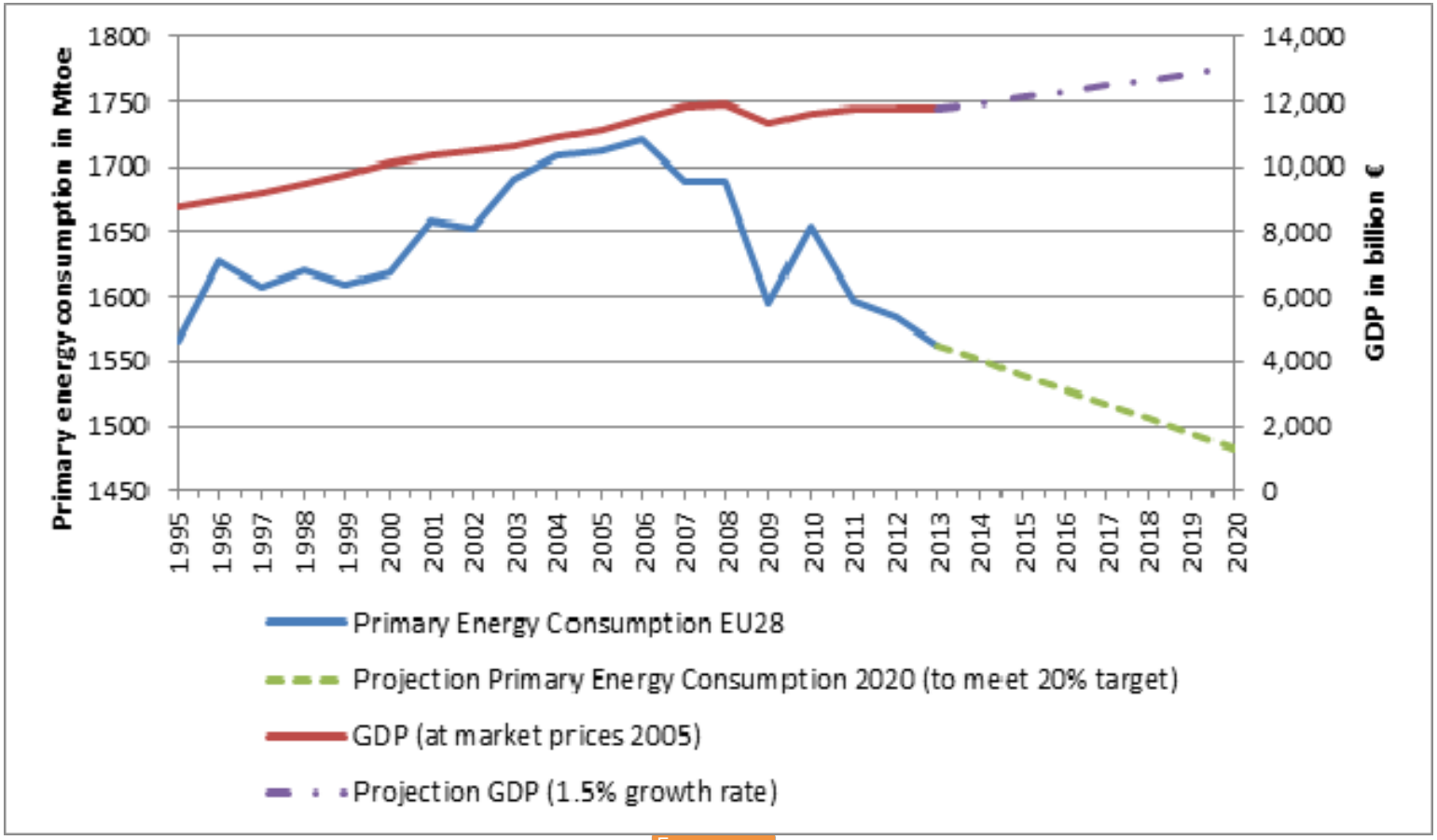
- **Minimum performance standards for buildings with strengthened requirements for existing stock**
- **Energy Performance Certification**
- **Nearly zero-energy building targets for new buildings**

Underpinned by a benchmarking system to improve the level of ambition and keep it under review

Significant unrealised potentials



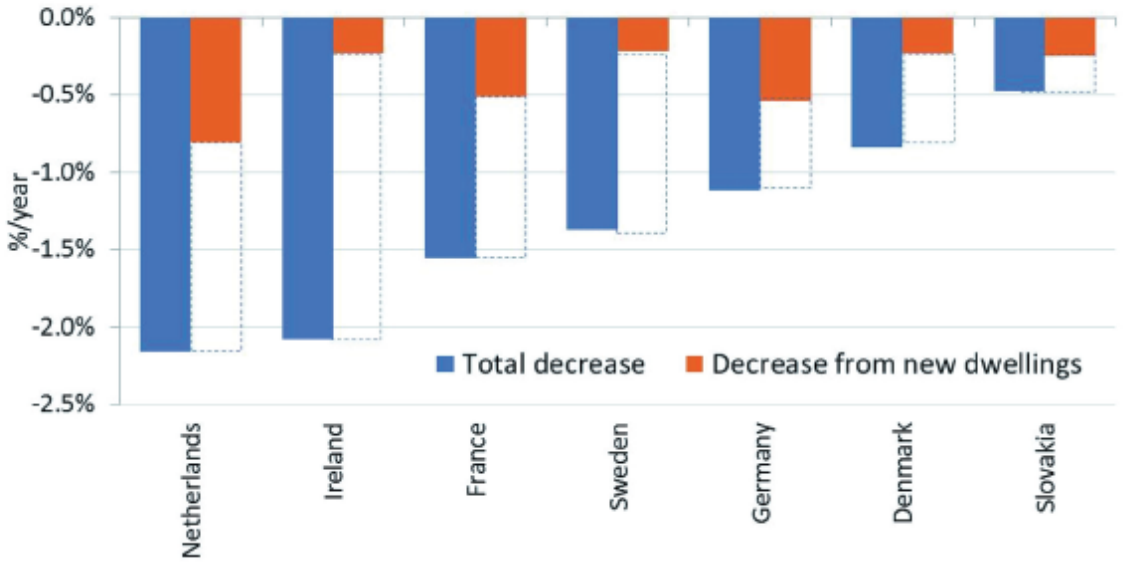
Energy efficiency policy doing its job



Efficiency requirements in the building codes have an impact

- New dwellings built in 2009 consume on average **40% less** than those built in 1990 (11% for IE, 16% for SE, 27% for DK, around 35% for FR and NL, around 50% for DE and SK).
- This positive effect is however restricted by the often limited volume of construction

Figure 49: Effects of building standards in selected EU countries (1990-2009)[83]

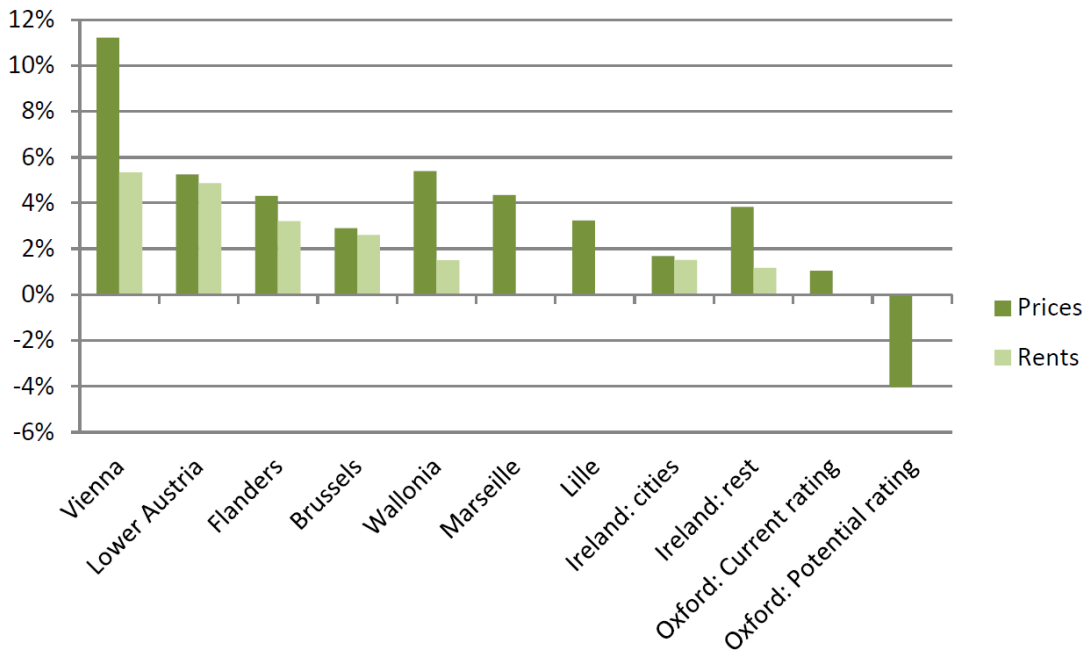


Share calculated from the ratio between the effects of new dwelling (orange bar in the Figure) and the total variation (blue bar).

Source: **Energy Efficiency Trends in the EU "Lessons from the ODYSSEE MURE Project"**, January 2013

EPCs give value to efficient buildings

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



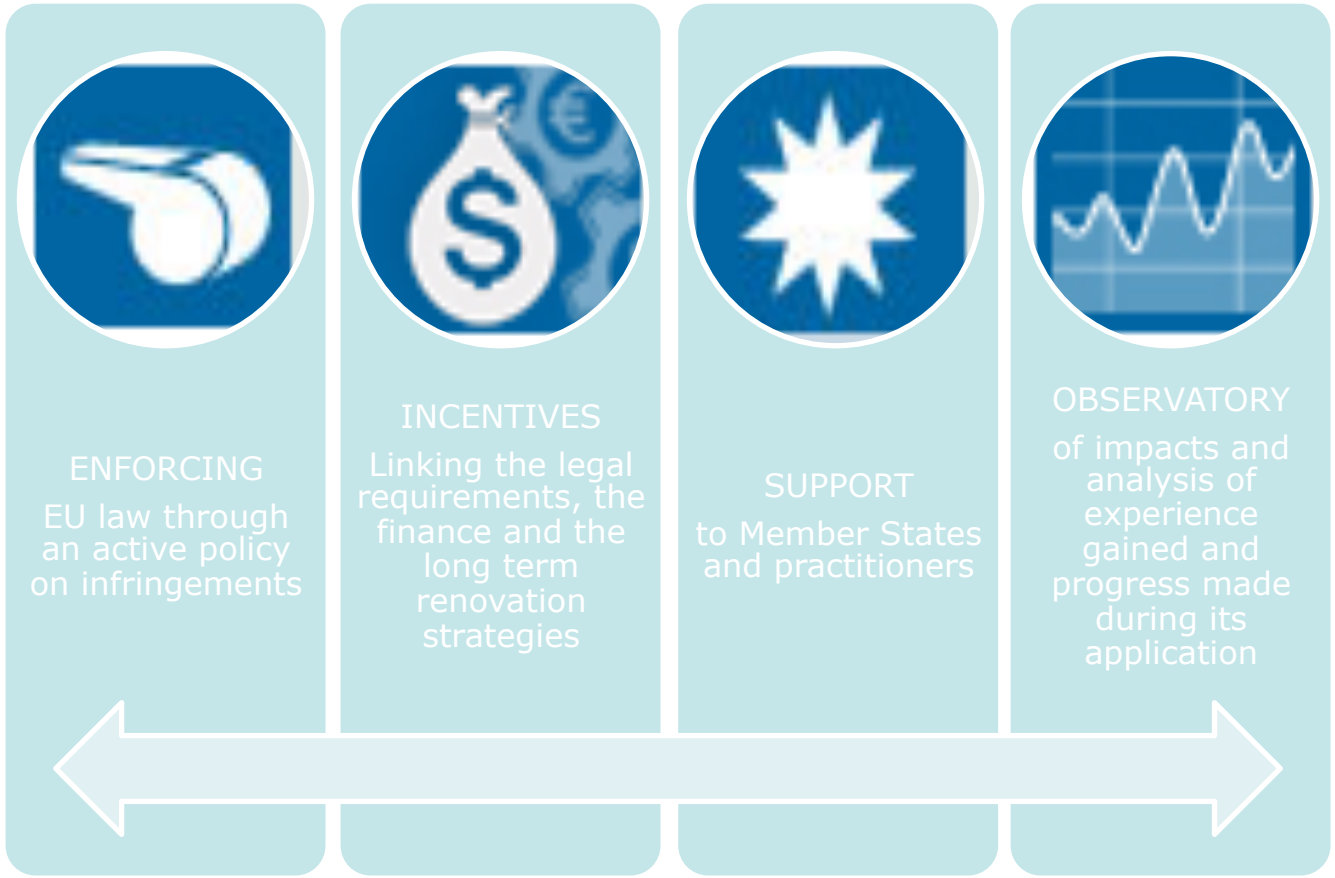
… but implementation is yet insufficient

With efforts for the EPBD concentrating on:

- **Strengthening local and regional verification of national building codes**
- **Accurately informing consumers of the energy performance of buildings for sale or rent;**

In combination with making full use of available financing in particular ESIF

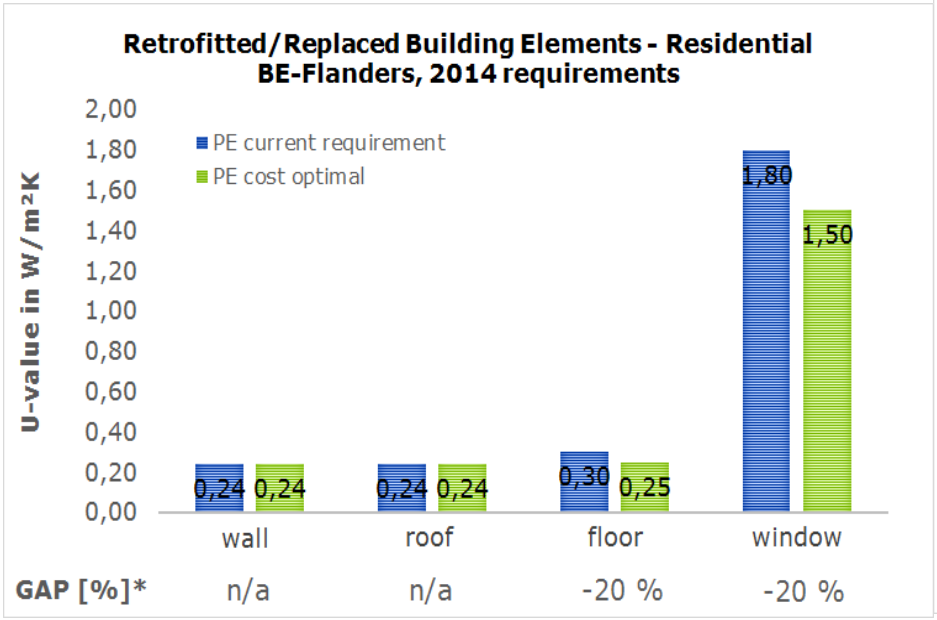
Tapping the potential linked to the full implementation of the EPBD

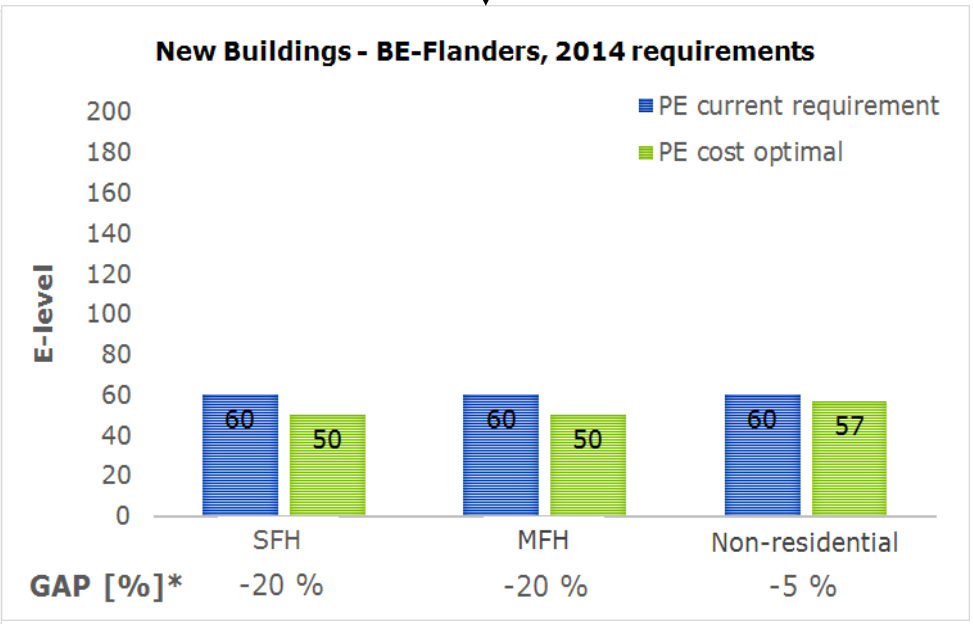


Convergence to NZEB

	Kostenoptimaal E-peil (-)	Kostenoptimale zone E-peil (-)	Kostenoptimaal primair verbruik (kWh/m².a)
Rijwoning	43	41 - 54	61
Halfopen woning	43	40 - 49	68
Vrijstaande woning 1	46	40 - 51	97
Vrijstaande woning 2	45	44 - 51	76
Appartement midden-onder	41	26 - 52	70
Appartement midden-midden	22	20 - 30	30
Appartement zijkant-boven	36	32 - 37	64

Tabel 22 - Overzicht kostenoptimale E-peilen per referentiewoning





What about 2030?

Overview of sectoral end-use energy saving potentials.

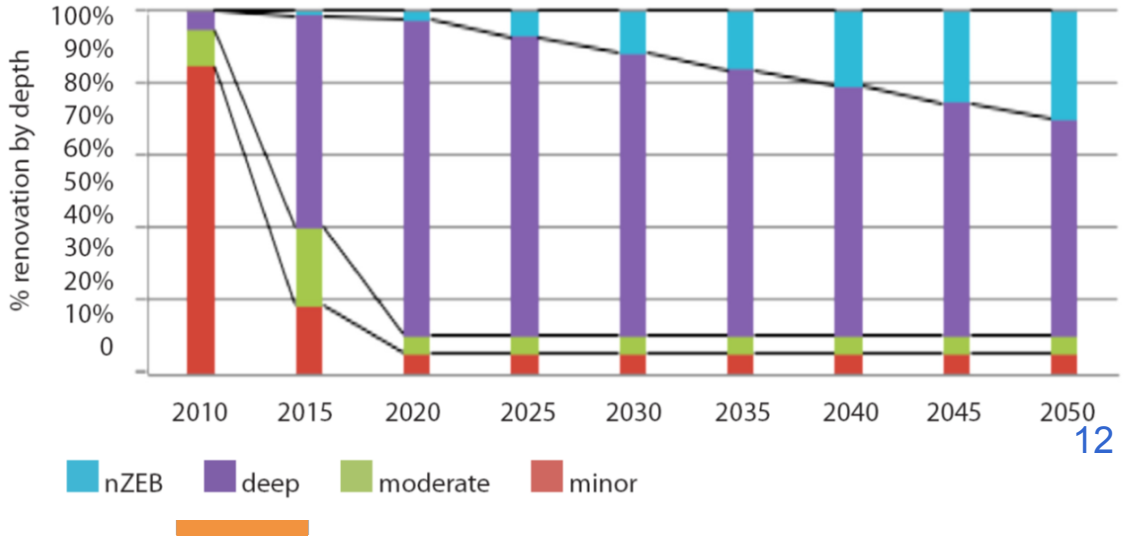
Sector	LPI (absolute final savings in Mtoe against Baseline in 2030)	HPI (absolute final savings in Mtoe against Baseline in 2030)	LPI (reduction against Baseline in 2030)	HPI (reduction against Baseline in 2030)
Residential	17	72	5.9%	25.4%
Tertiary	16	36	8.9%	20.4%
Transport	28	41	9.2%	13.4%
Industry	28	37	9.9%	13.4%

Improving renovation rates & depths

Country	Residential	Non-residential	Unspecified	Comment
FI			1-1.5%	
DE			0.7%	
HU	1.30%			
IT			1.20%	
Other sources*				
Novikova (2008)			1%	
Janssen (2010)			1.2-1.4%	
Petersdorrf (2004)			1.80%	EU 15
Lechtenböhmer (2009)			1%	EU 27

Source: BPIE Survey

Source: Odyssee-Mure



Gradually refurbishing to nearly zero-energy levels

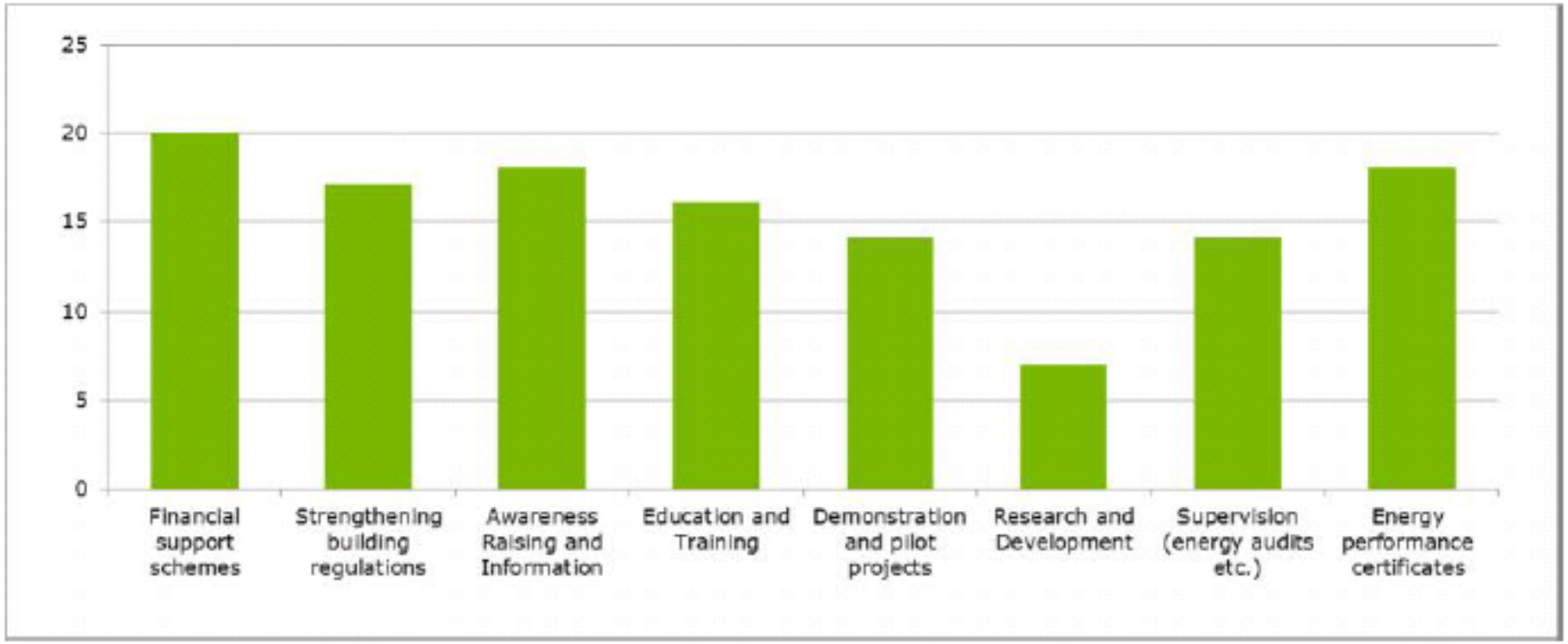
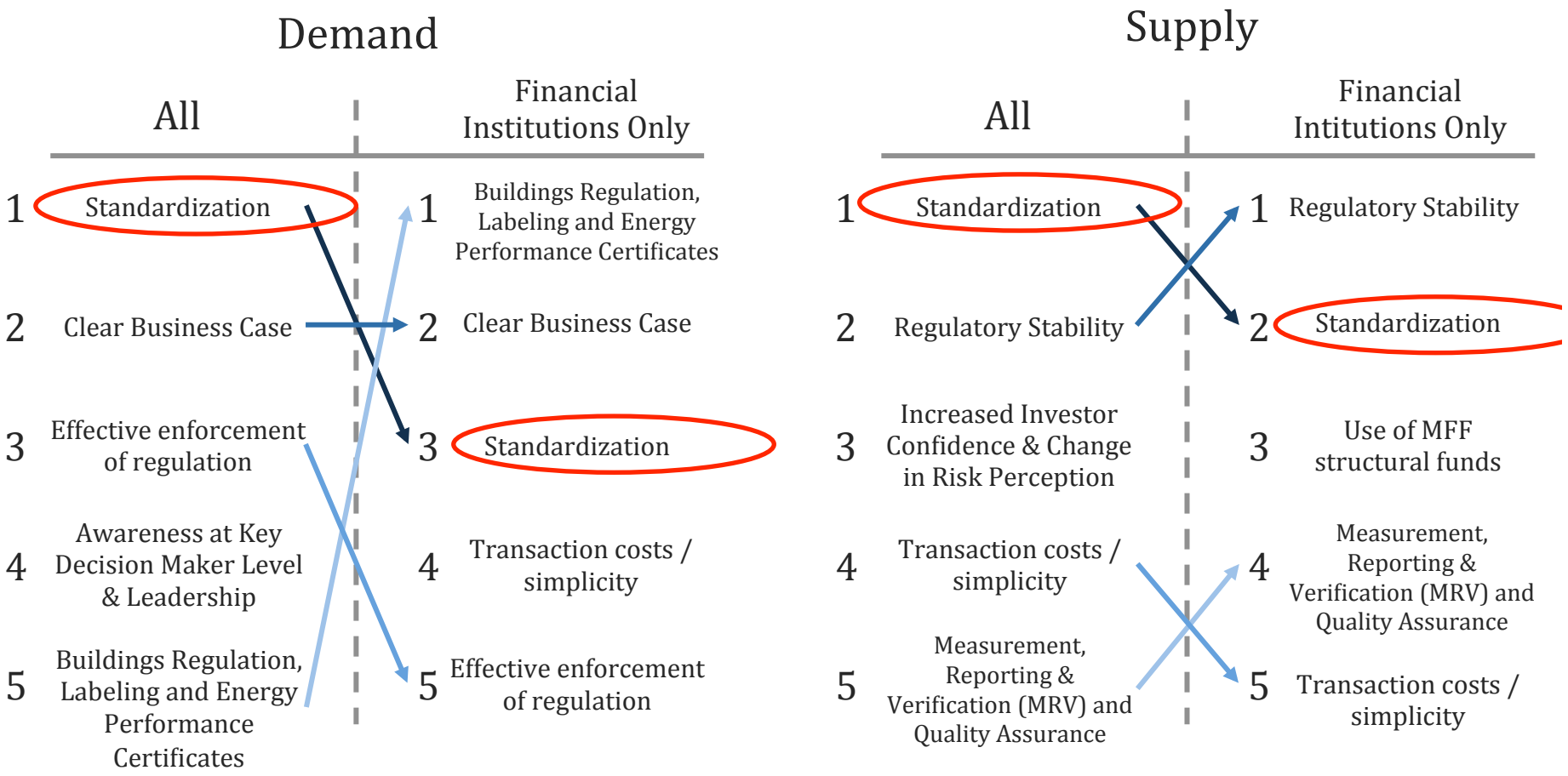


Figure 6: Main policies and measures in support of mayor renovations to NZEBs in Member States

Drivers of Demand for and Supply of Energy Efficiency Investments in EU Buildings

Energy Efficiency
Financial Institutions Group

EEFIG ranking of key drivers affecting demand and supply of energy efficiency investment by market segment



Some challenges…

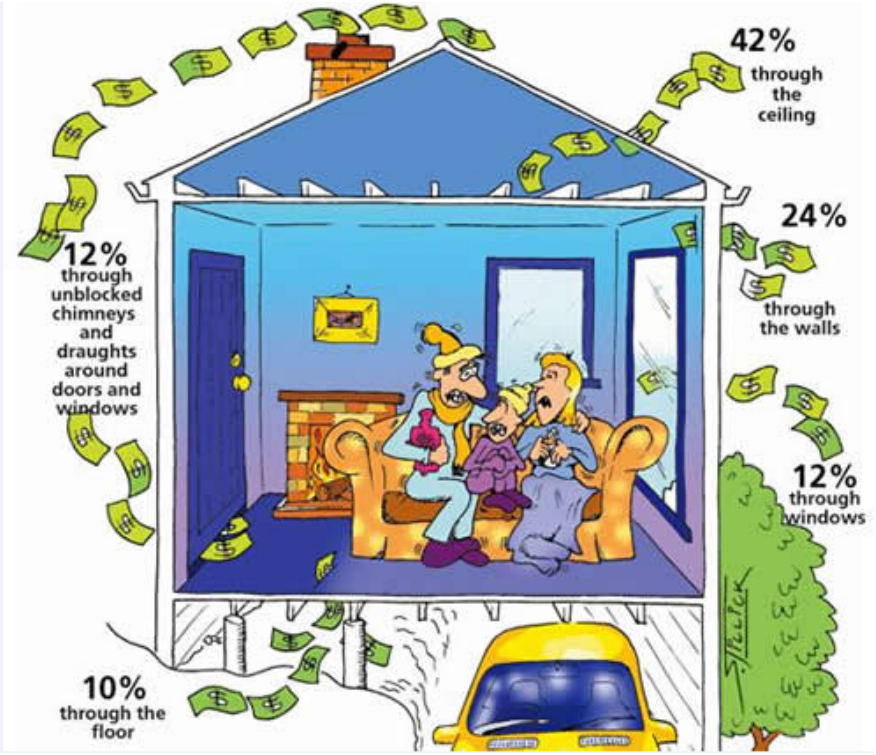
Effective implementation of the current framework

- Proper transposition and full implementation of the EPBD
- Guidance and additional support on NZEB, assessment of long term renovation strategies, guidelines on cost-optimal regulation
- Address the non-residential sector through the common EU voluntary certification scheme

Mobilising investments

- Effective use of European Structural and Investment Funds and other funding (EIC, H2020 etc.)
- Work with the financial sector to create the right framework conditions for investment (e.g. development of the right standards)
- Stimulate demand (through EPBD standards, a robust implementation of existing rules, e.g. on reliability of EPCs)

Thank you for your attention



Paula Rey García
Tel: +32(0)2 29 59114
Email: paula.rey-garcia@ec.europa.eu
Website: http://ec.europa.eu/energy/efficiency/index_en.htm