



*Energy Efficiency in Buildings- Improving the database
IEE project Odyssee-MURE
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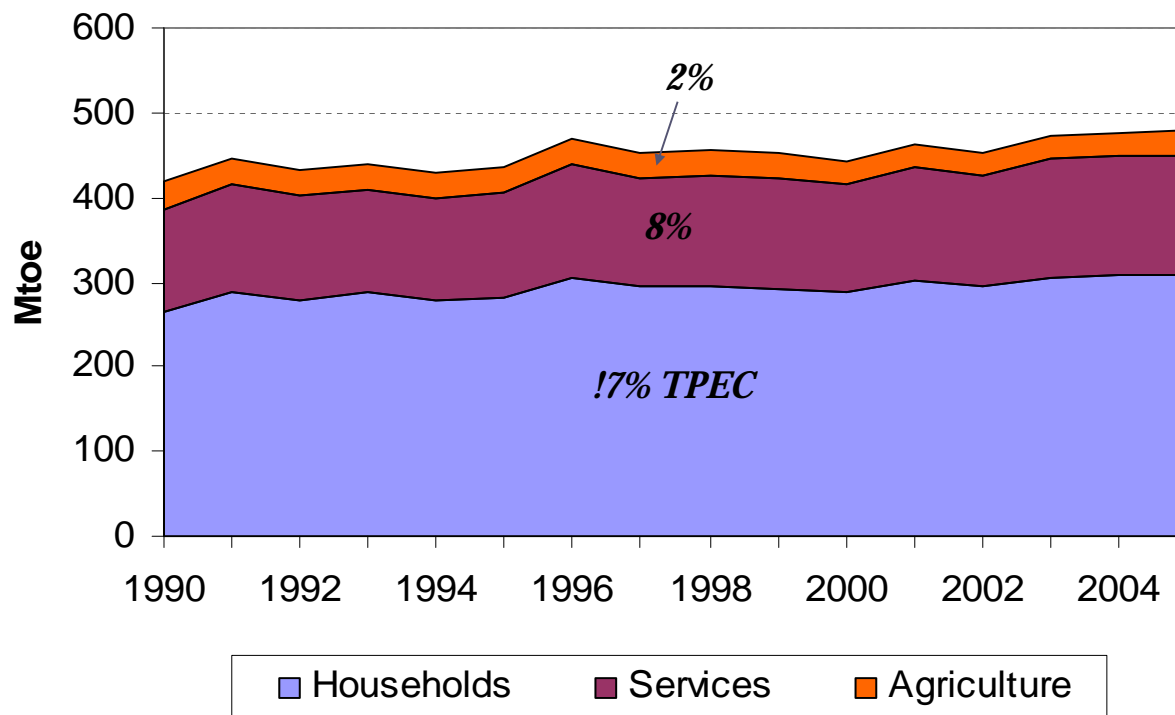
Trends and policies for space heating in the EU-27

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Content

- Space heating
- Household trends
- House policies
- Tertiary trends
- Tertiary policies
- EU policies

Energy consumption analysed (EU-27)



Space heating issues

Households

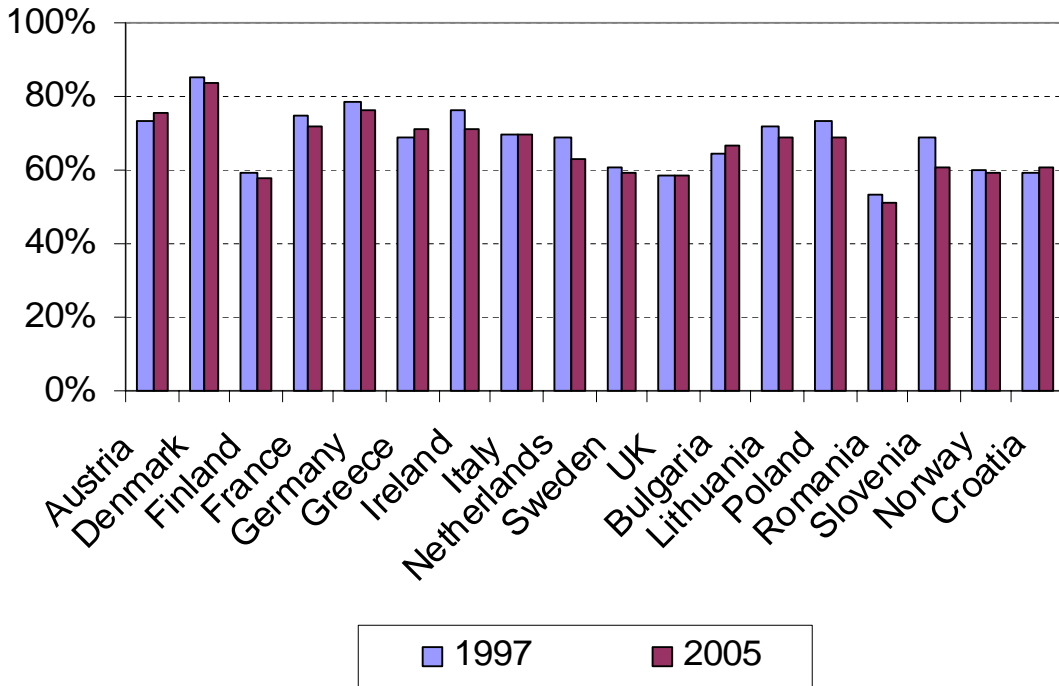
- Energy use trends for space heating
- Unit consumption per dwelling
- Policy measures on dwellings
- Policy impact and energy savings

Tertiary

- Unit consumption per employee
- Policy measures on buildings

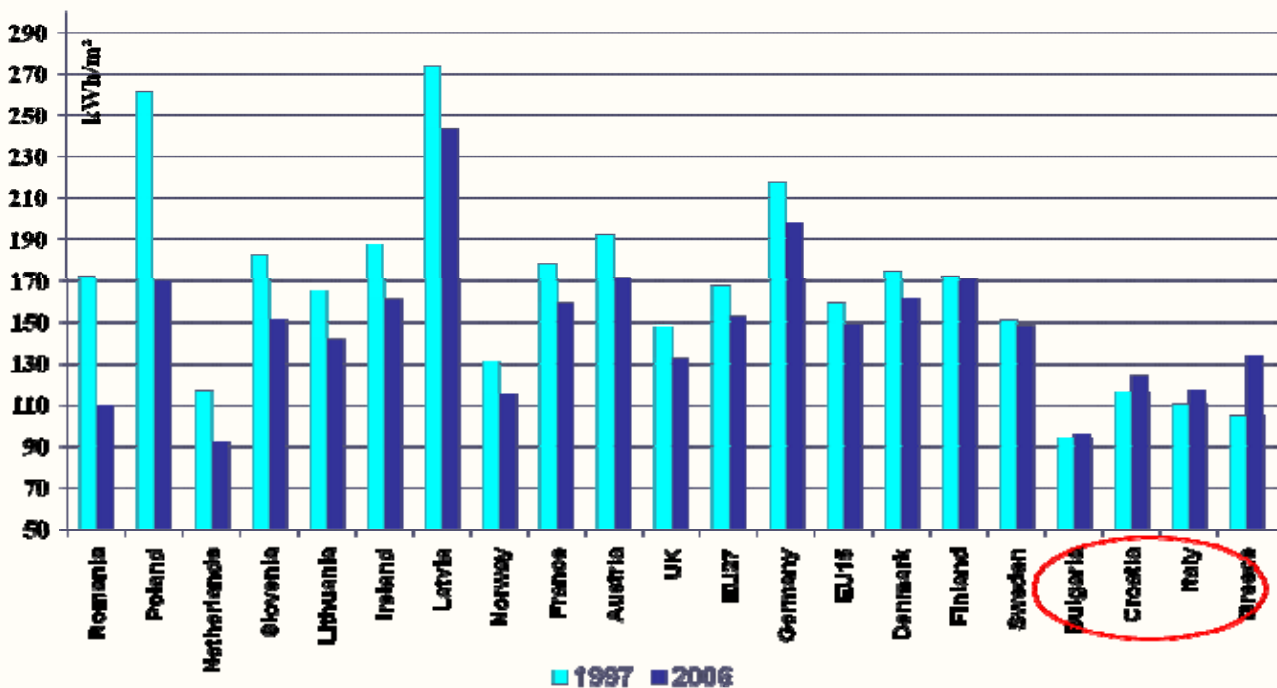
Fraction space heating in Household energy use

Mostly 60-80%, fraction not dependent on cold climate, mostly decreasing, increasing cases same as for koe/m²



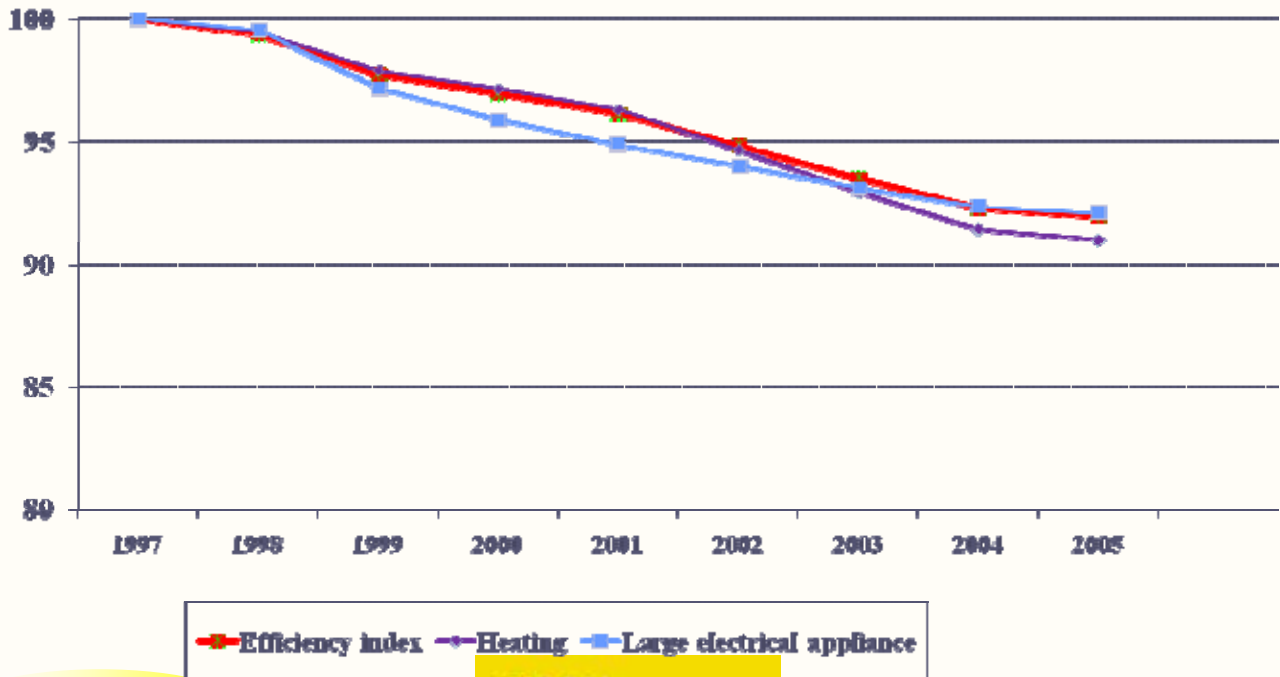
Change in heating consumption per m²

Only increase for southern countries probably due to more comfort, large decrease for NMS with cold winters partly due to much higher costs for heating



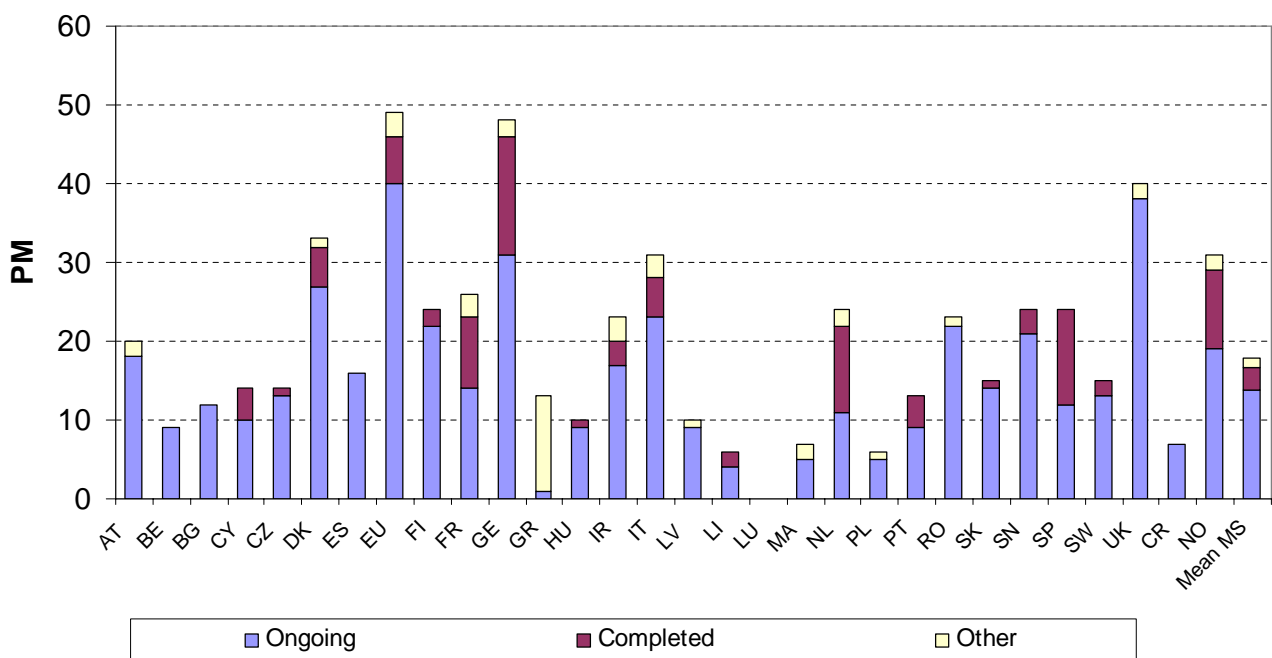
Energy efficiency progress for households EU-27

Overall efficiency progress with a weighting of indices for 8 end-uses/appliances : heating (toe/m²), water heating, cooking (toe/dwelling) and 5 appliances (kWh/year). Almost same efficiency increase for space heating (9%) and appliances (8%), leveling off recently



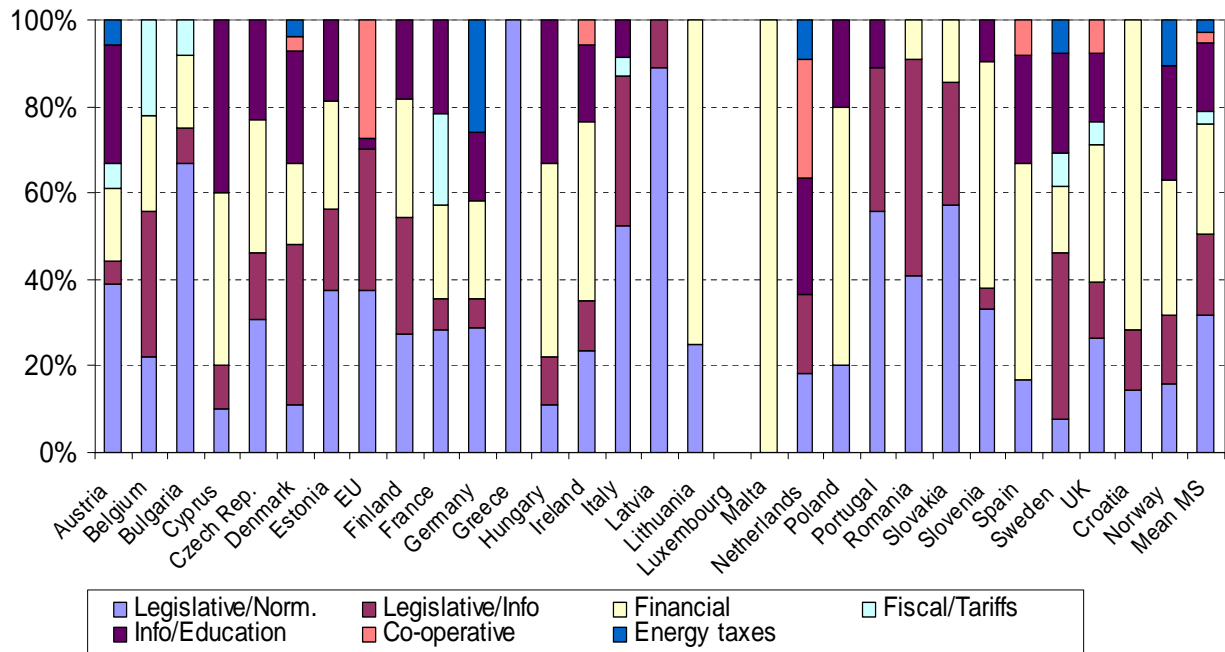
Status of all policy measures for Households

Completed PM also shown because of their influence on present savings, other = planned PM, no PM for Luxemburg and almost no one for Greece, 15 ongoing PM on average, many PM for EU of the same type (labels), NMS have less PM (due to later start of policy?)



Type of (ongoing) policy measures for Households

Legislative and financial PM almost everywhere, cooperative (VA) very scarce (except EU and NL), taxes also scarce (see also Mean MS to the right), NMS have less diversified package of PM, probably due to shorter policy on savings



Impact of policy measures: method

Qualitative estimate per measure

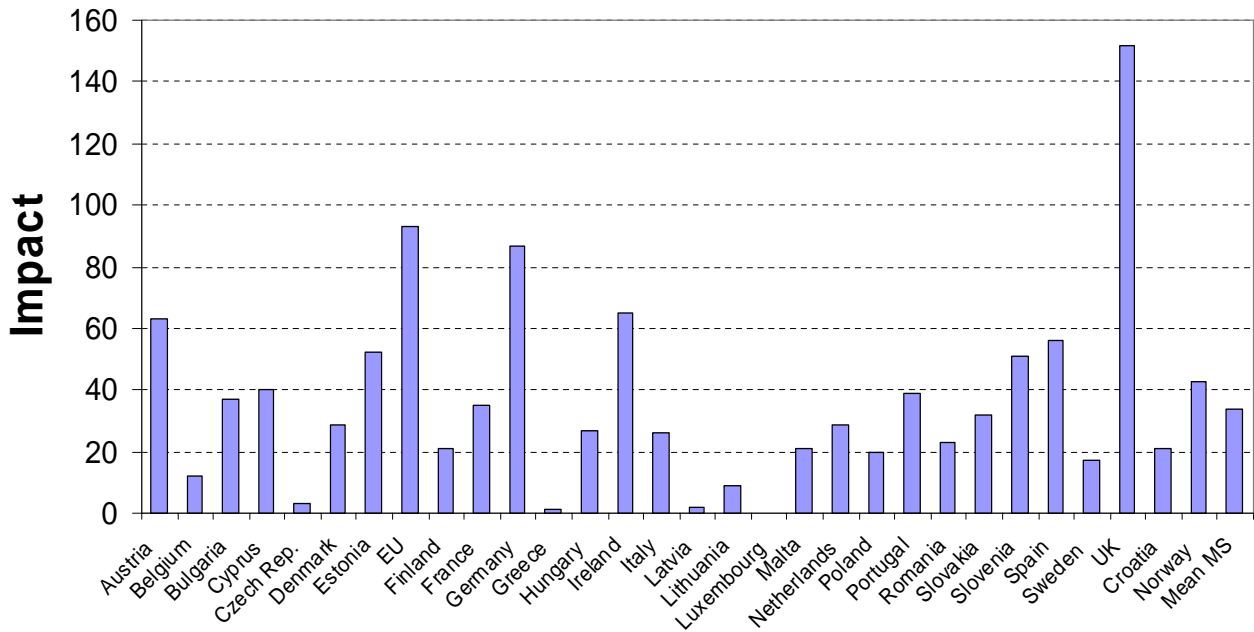
- Fraction of total energy use
- High > 1,5%
- Medium 0,5 – 1,5%
- Low < 0,5%

Calculation of total impact

- Policy measures on targeted energy use
- Weight 5 (high), 3 (medium) or 1 (low)

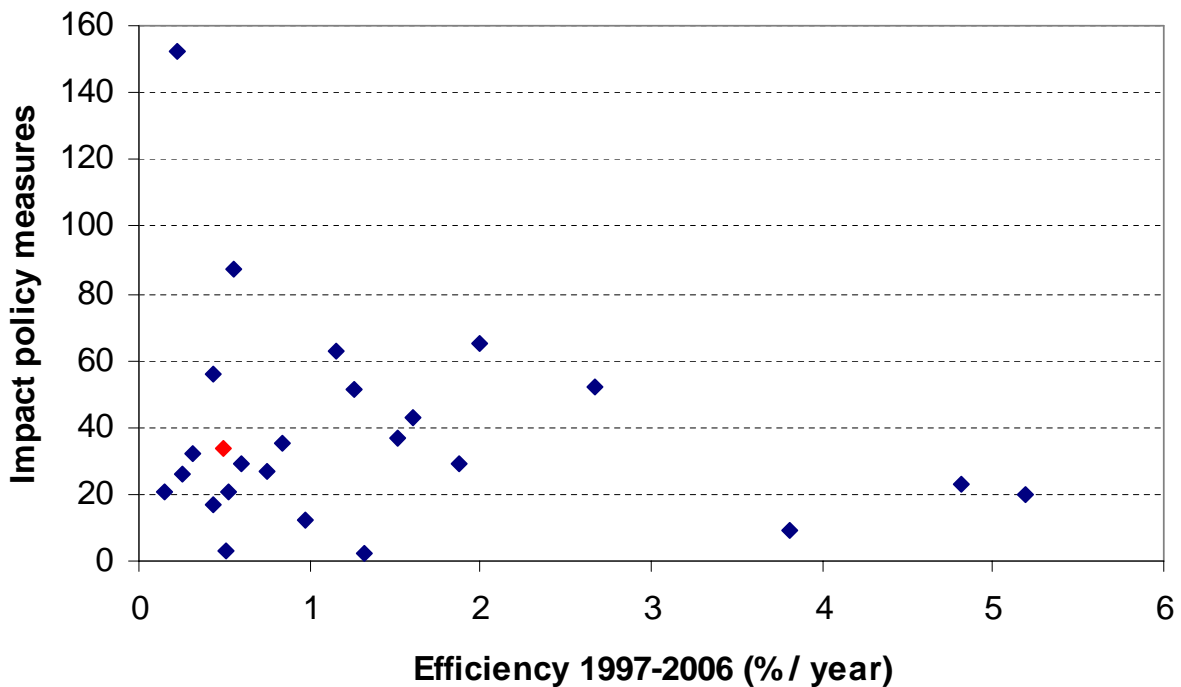
Impact of all policy measures for Households

Except EU largest total impact of PM for UK (due to large number) and for GE (also many PM), but some small MS have also substantial impact (Austria and Ireland)



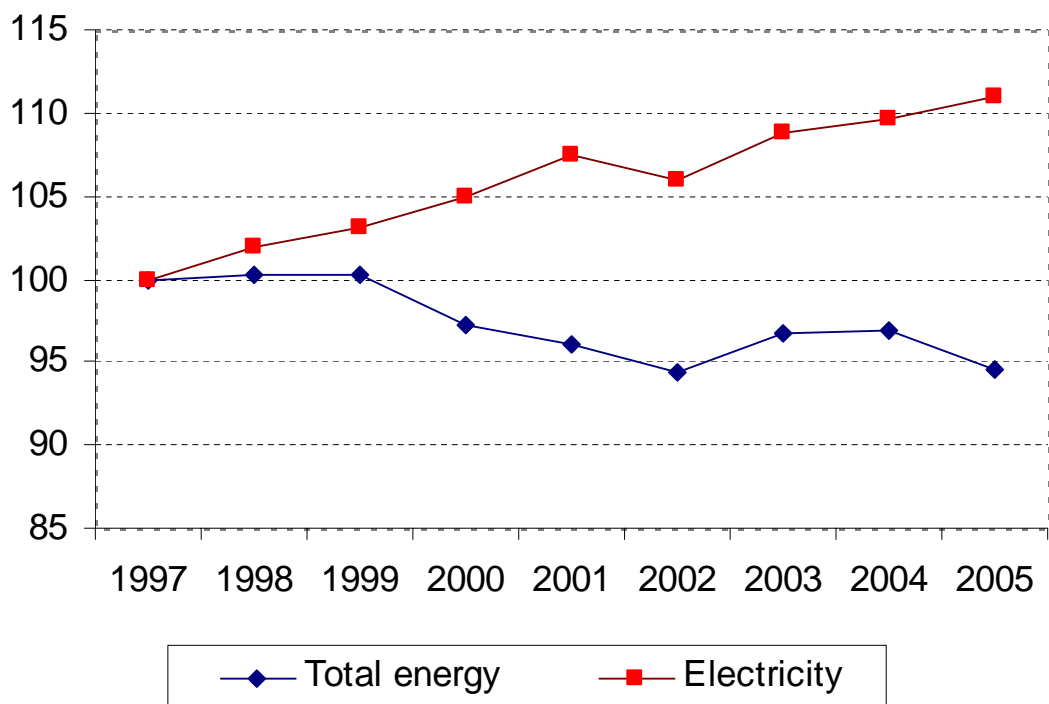
Impact of policy measures and energy efficiency increase for Households

Outliers (large impact/few savings or small impact/large savings) question existence of relation impact ⇔ efficiency increase (visible for other cases). Probably other factors of importance



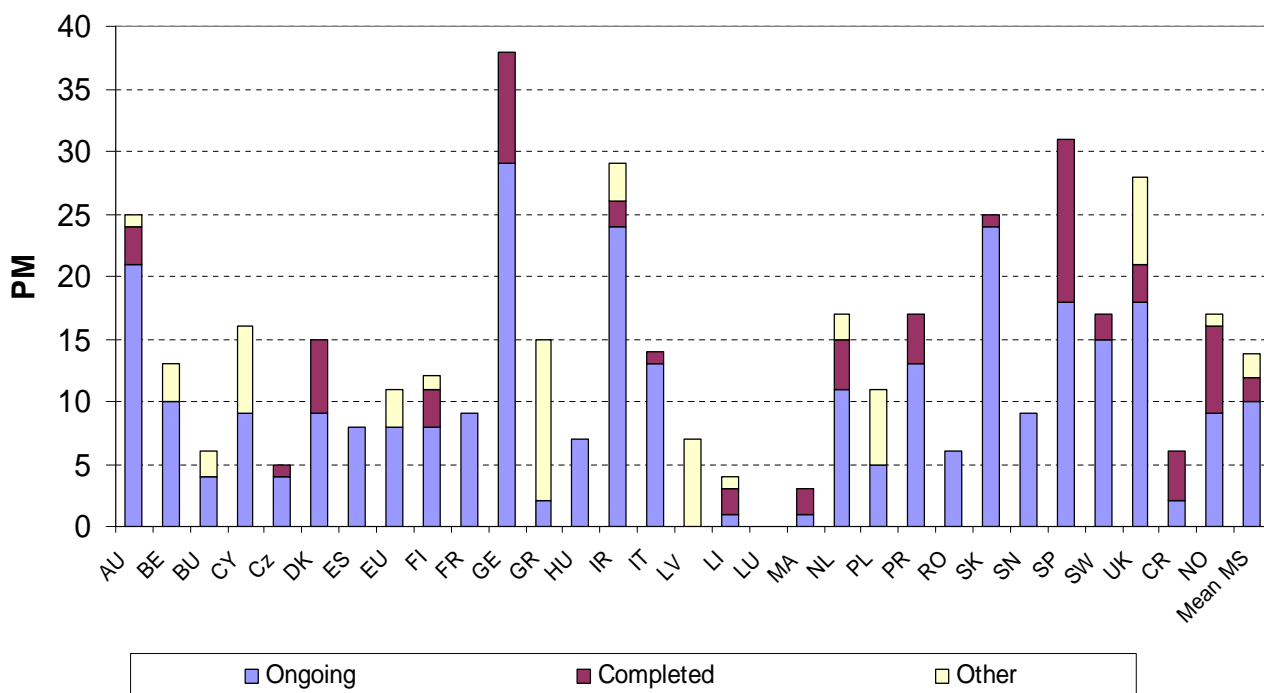
Trends for total energy and electricity consumption per employee for Services (EU-27)

Few data on space heating, only specific use per Euro VA or employee, last one increasing for electricity, decreasing for energy (including electricity > thus even more decreasing for heat)



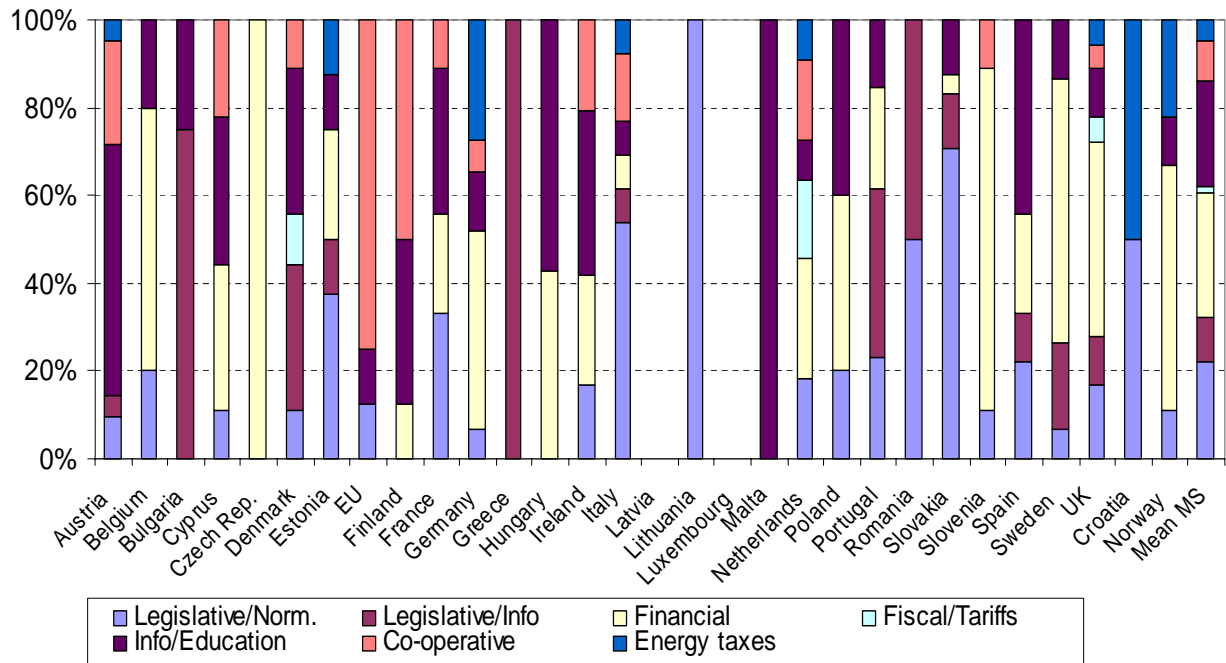
Status of all policy measures for Tertiary

Mean MS > on average 10 ongoing PM (= 2/3 of Households), EU number less extreme, same MS as for Households with the most and the least PM



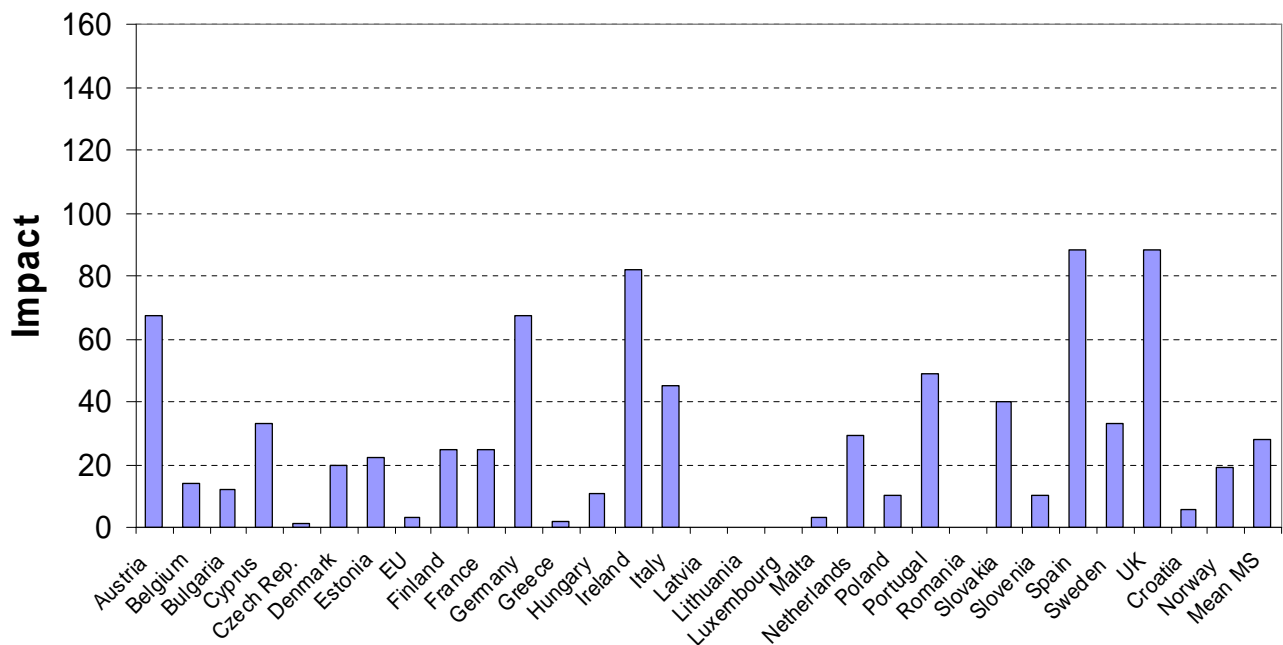
Type of (ongoing) policy measures for Tertiary

Mean MS > fraction Legislativeless (especially info) less pronounced than for Households, fraction financial same as for Households, fraction cooperative (VA) sometimes very large!



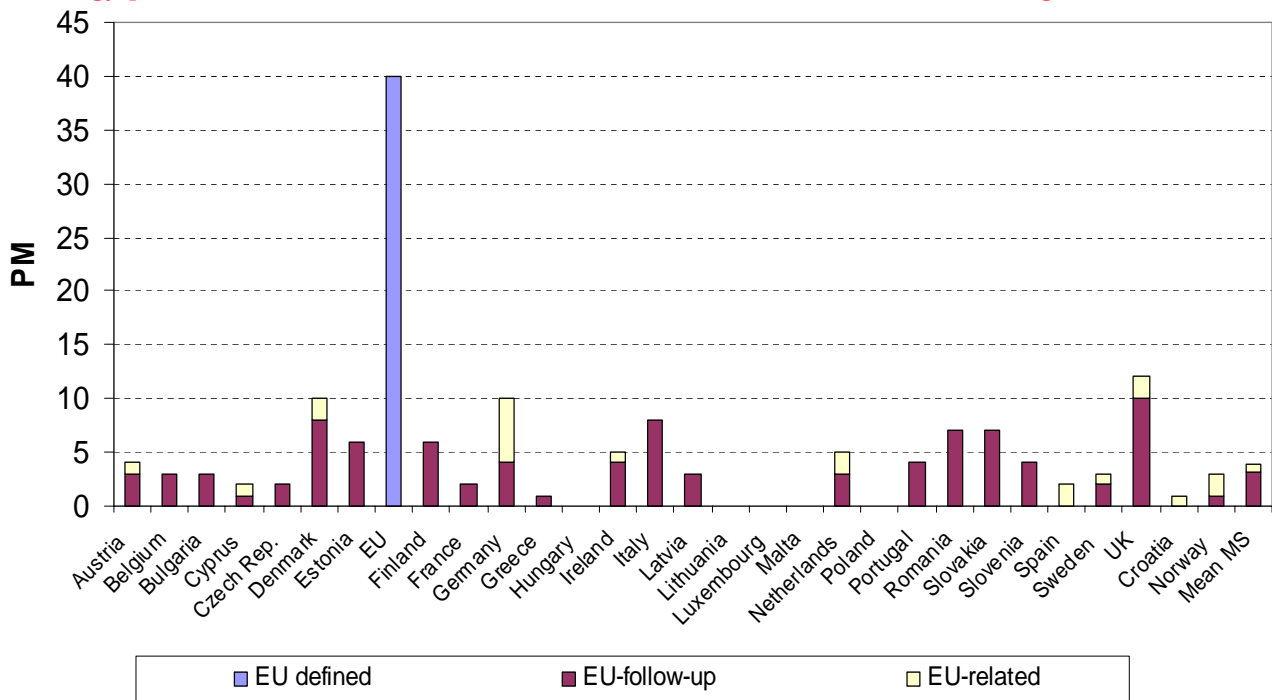
Impact of all policy measures for Tertiary

Same scale as Households > generally lower total impact, UK and GE again show large impact, more MS with low impact than for Households



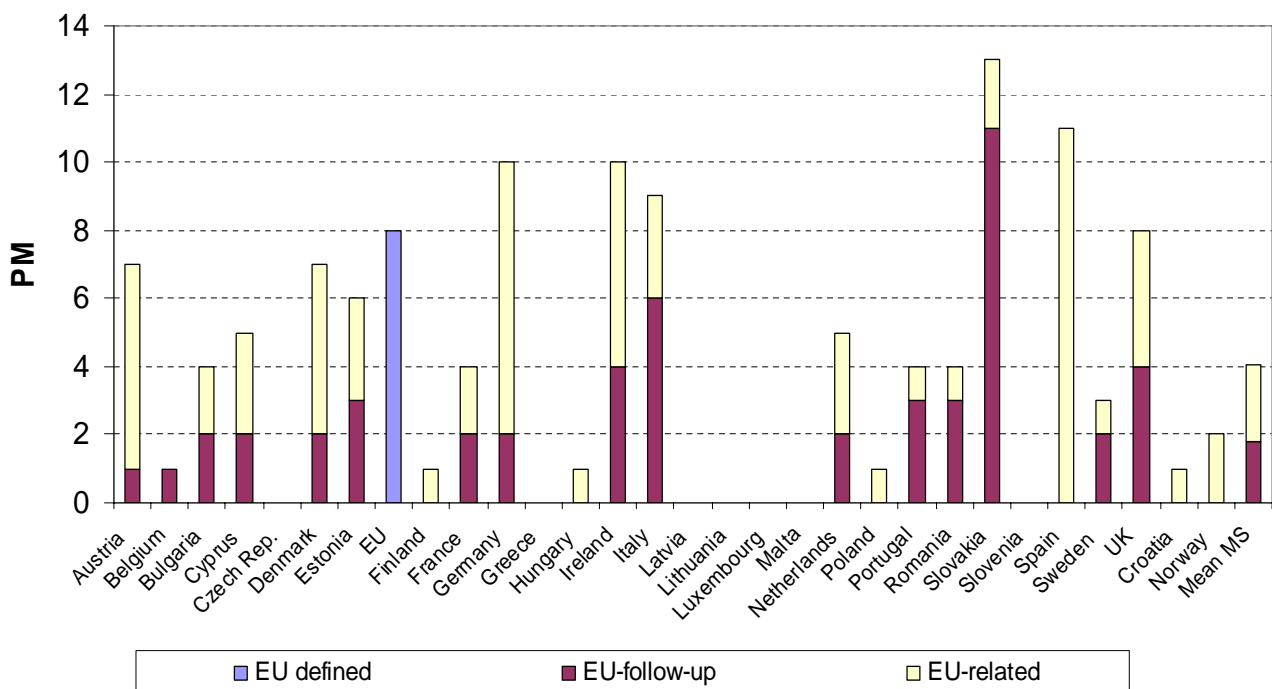
EU-origin of policy measures on dwellings

EU-defined = EU, EU-follow-up is national transposition for EPC, min.eff.boilers, individual billing, labeling heat equip. and certificates new/old dwellings. EU-related (subsidy on CHP, leasing equip, technology procurement and ecotaxes) indirect result from EU initiatives. On average 4 PM national



EU-origin of policy measures on buildings

EU-follow-up: EPC, min.efficiency/mand.inspection boilers, certificates buildings, EU-related: public lighting, mand.plan municipality, vol.labels buildings, info camp., info centers, techn.proc.and eco taxes. EU-defined much less than for Households, national numbers at same level (4 PM average)



APPENDIX

☛ **17 sheets**