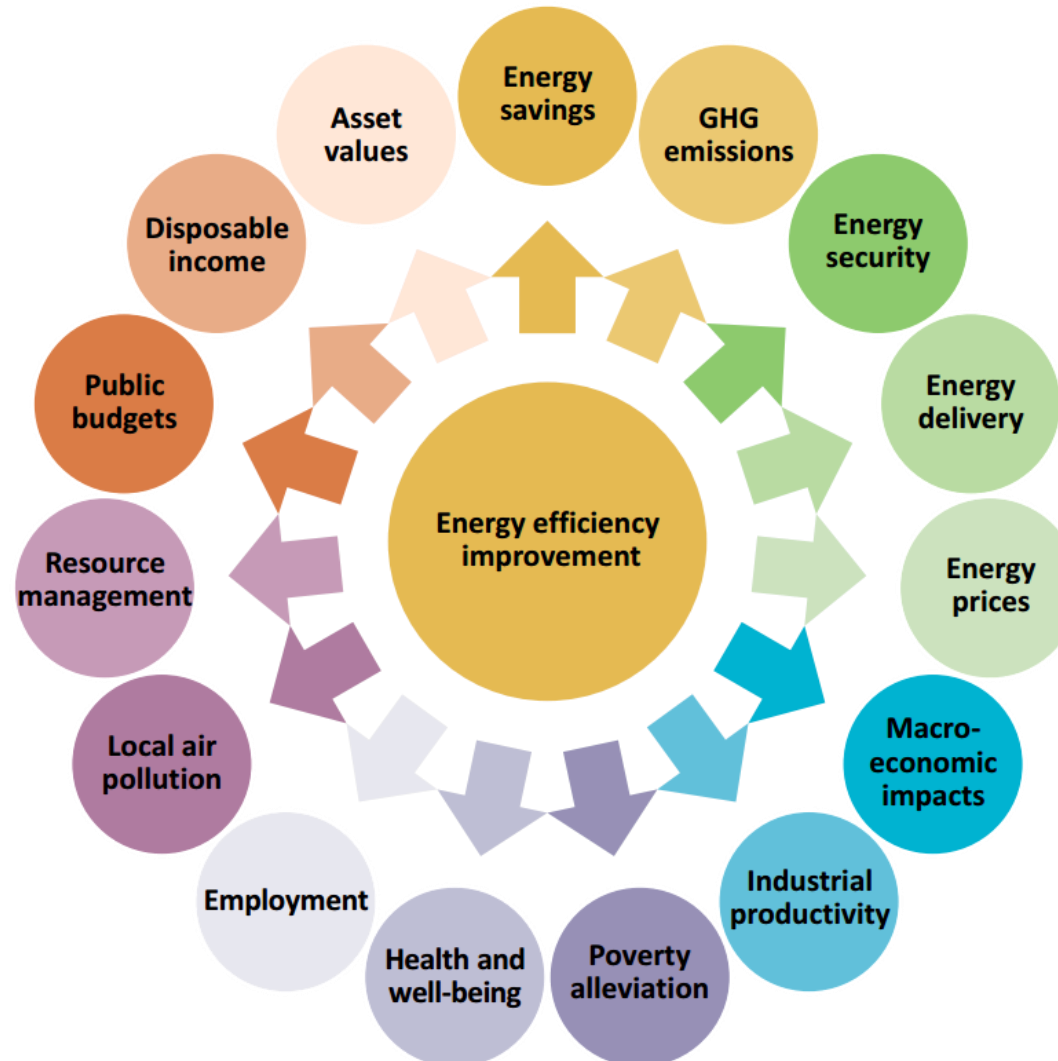


# Energy efficiency and energy savings

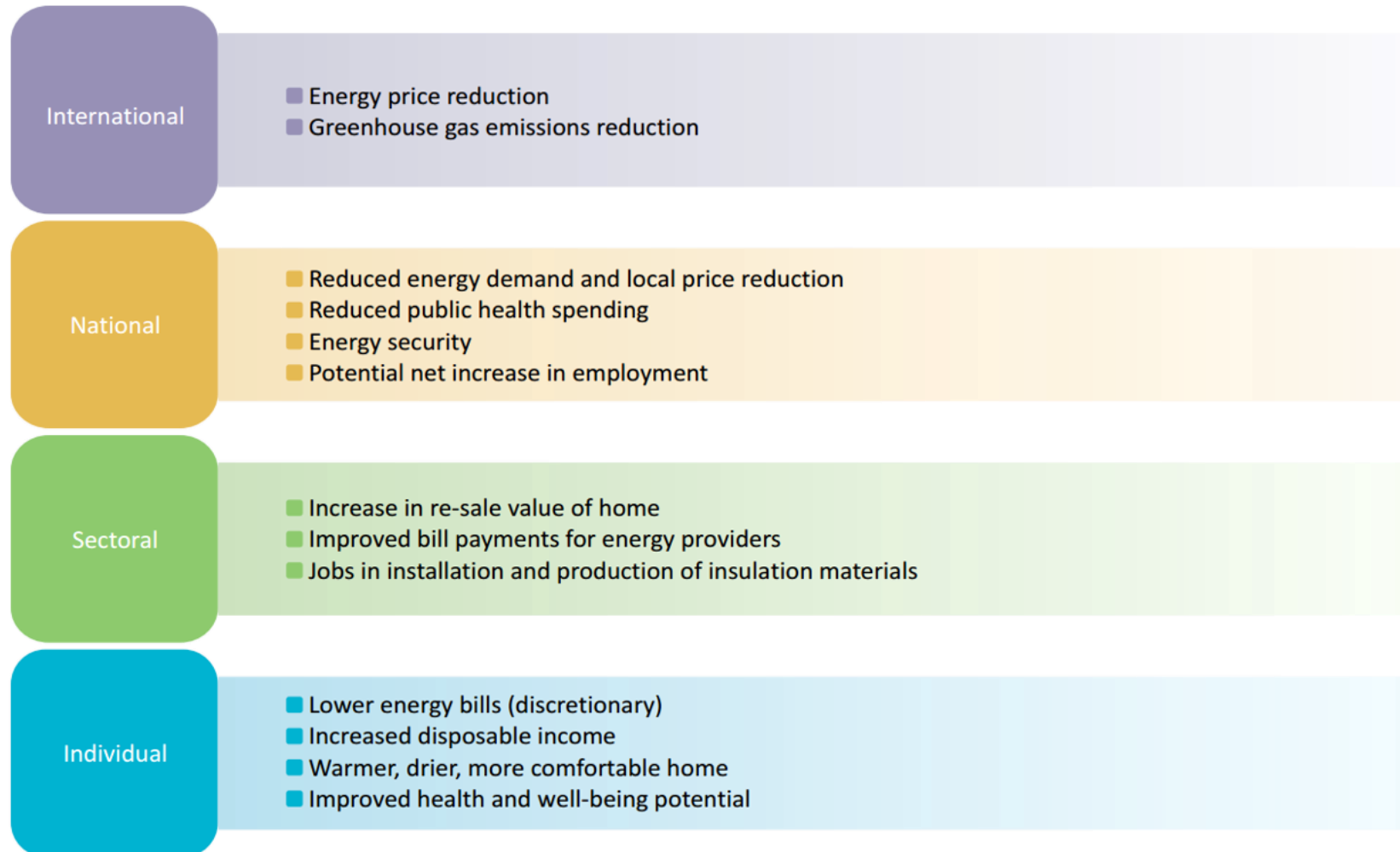
Lukáš Lehotský

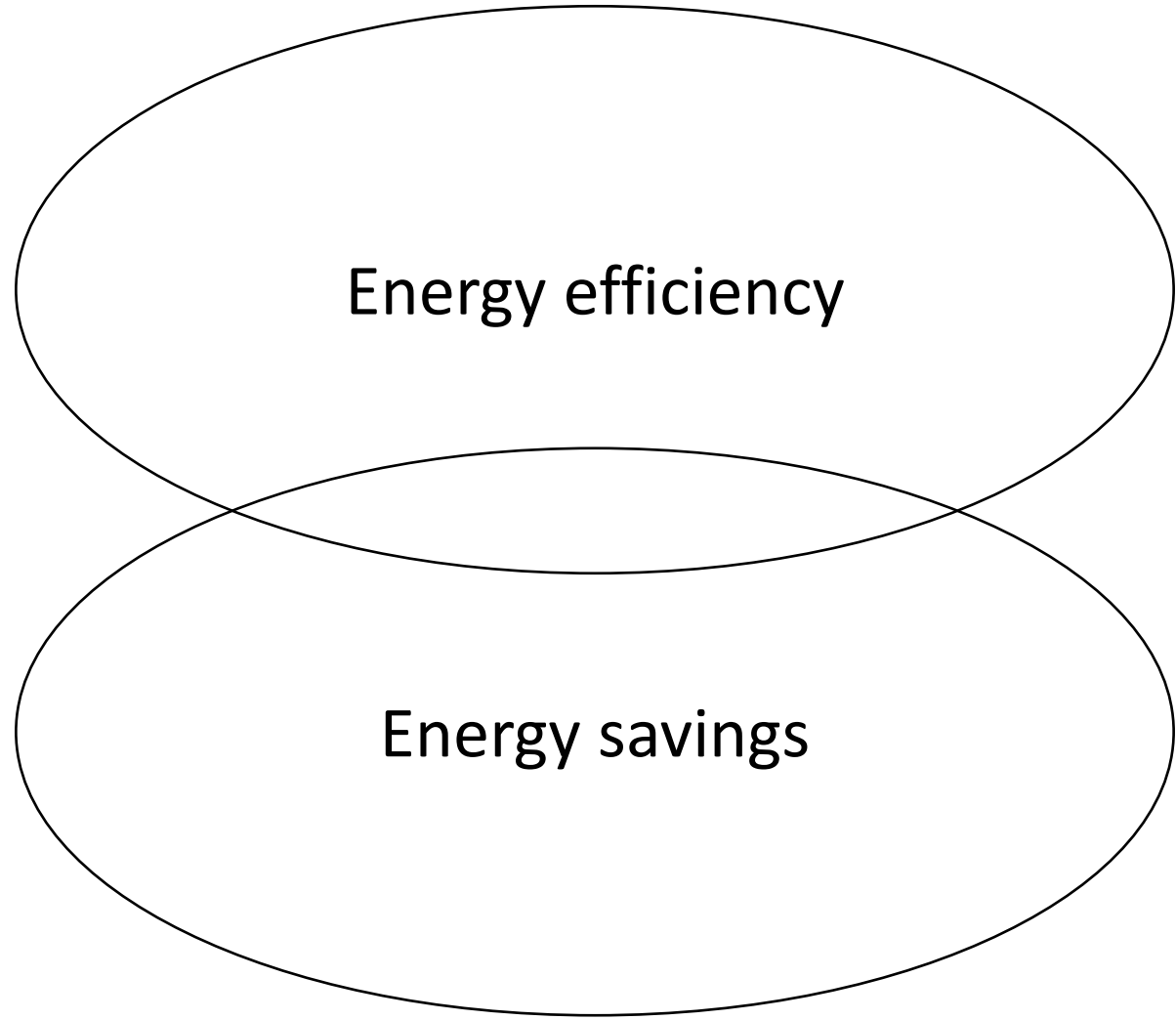
What is energy efficiency?

# Why energy efficiency?



# EE has impacts on multiple levels





Energy efficiency

Energy savings

Rebound effect/Jevons paradox

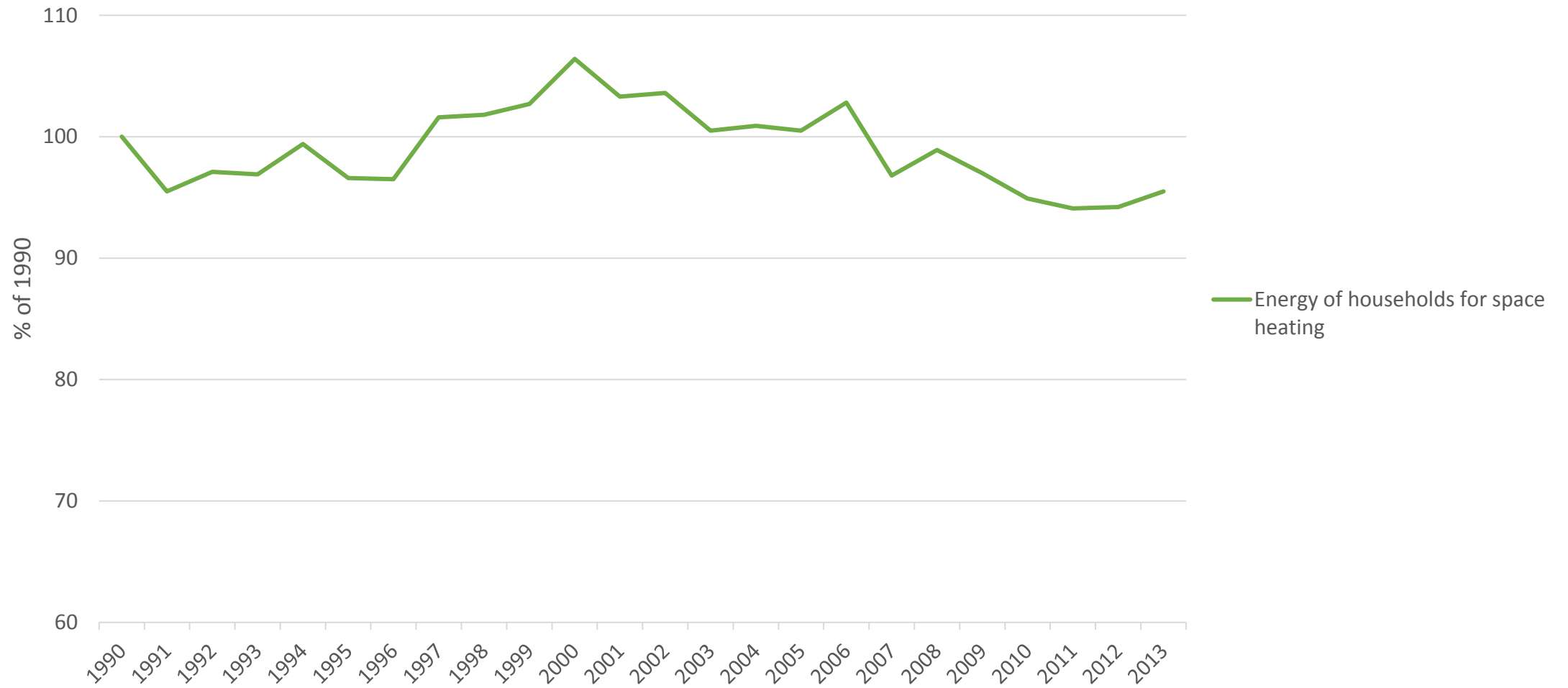
# Rebound effect

<b>Author</b>	<b>Country</b>	<b>Estimated rebound effect</b>
Khazzoom (1986)	USA (Sacramento)	65%
Dubin et al. (1986)	USA	8 – 13%
Dinan (1987)	USA	Small rebound but statistically significant
Hsueh and Gerner (1993)	USA	35% for electricity and 58% for gas
Schwartz and Taylor (1995)	USA	1.4 – 3.4% in the long term
Hirst (1987)	USA	5 – 25%
Nesbakken (2001)	Norway	15 – 55% (average of 21%)
Guertin et al. (2003)	Canada	29 – 47% in the long term
Source: Own from Greening et al. (2000), Binswanger (2001), and Sorrell (2007).		

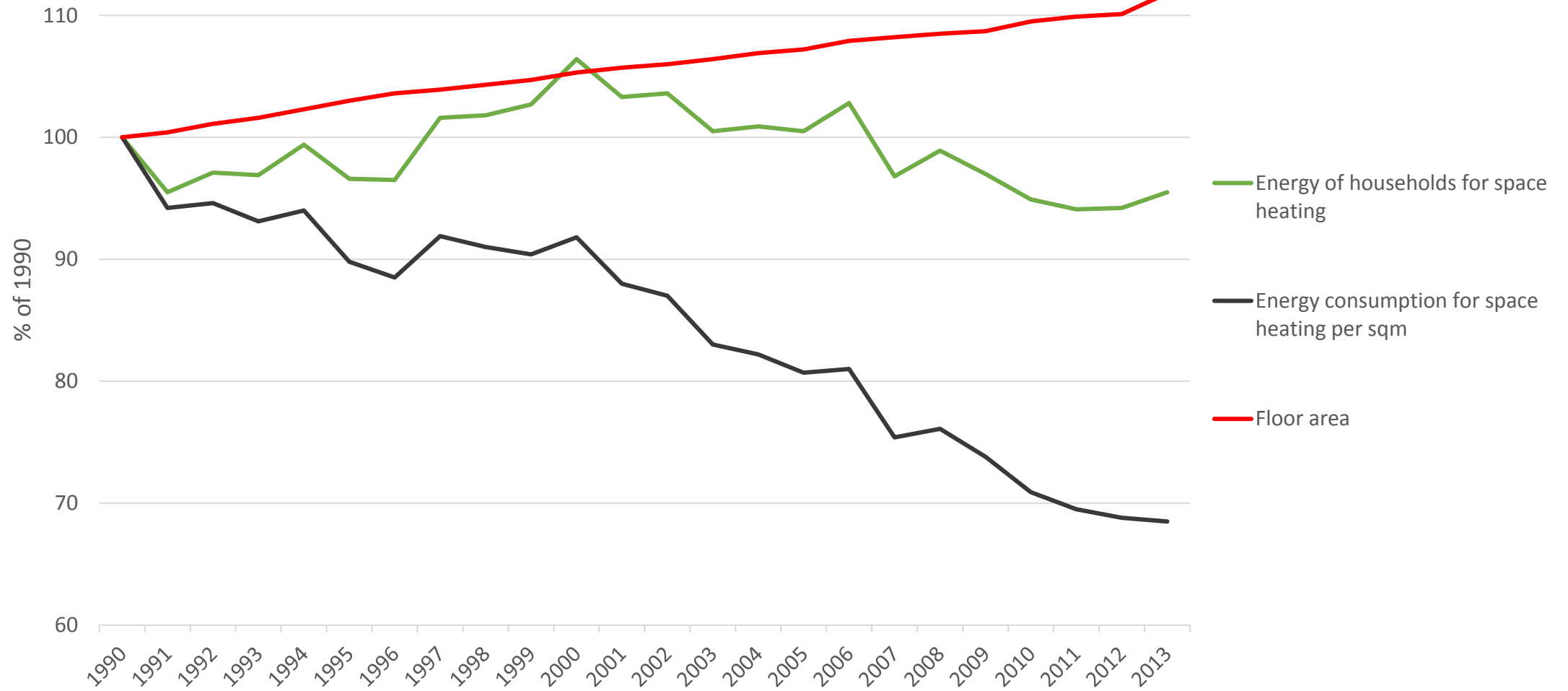
EE/ES and. environmental policies



How to assess impact of EE/ES policies?



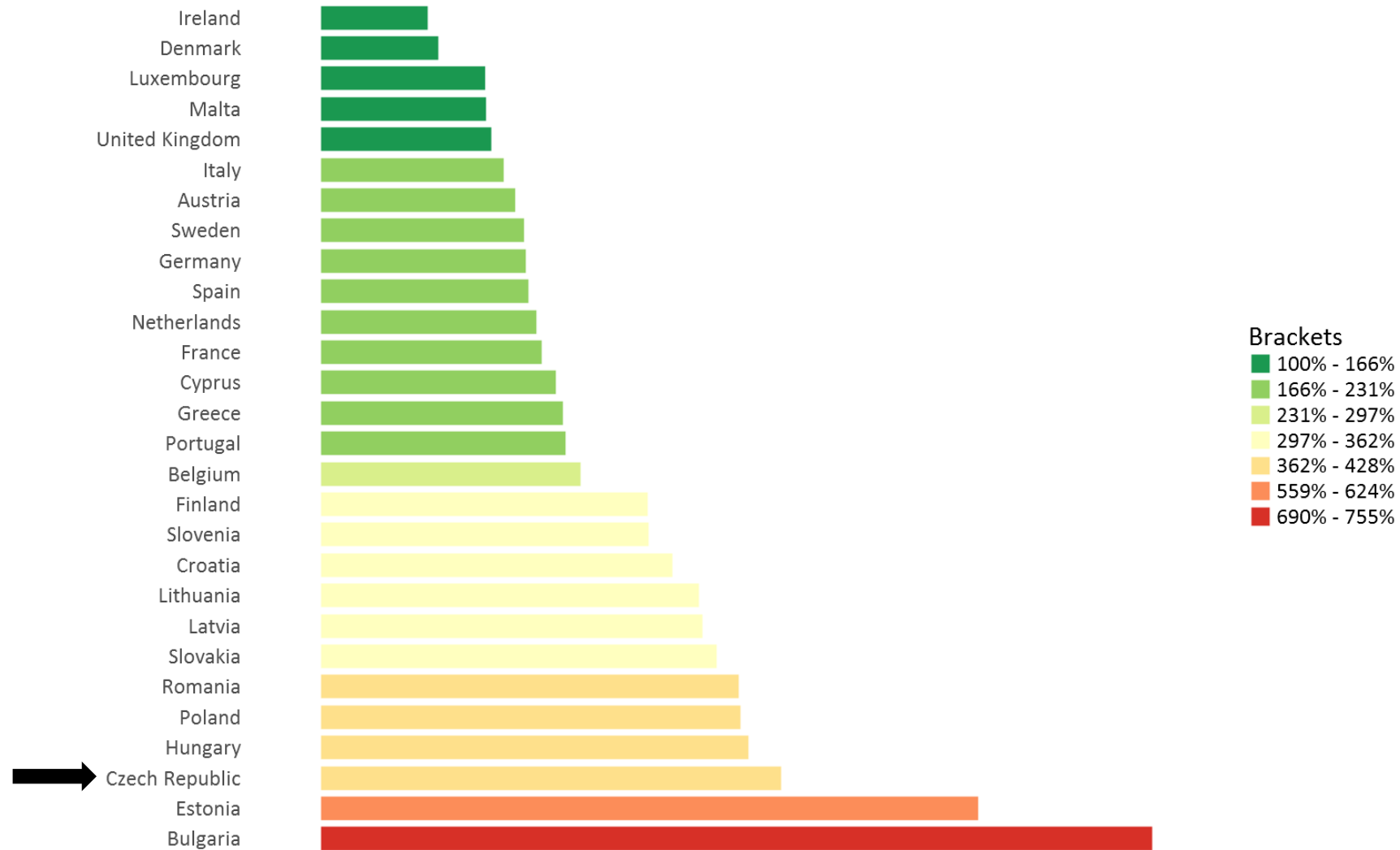
Source: European Environment Agency



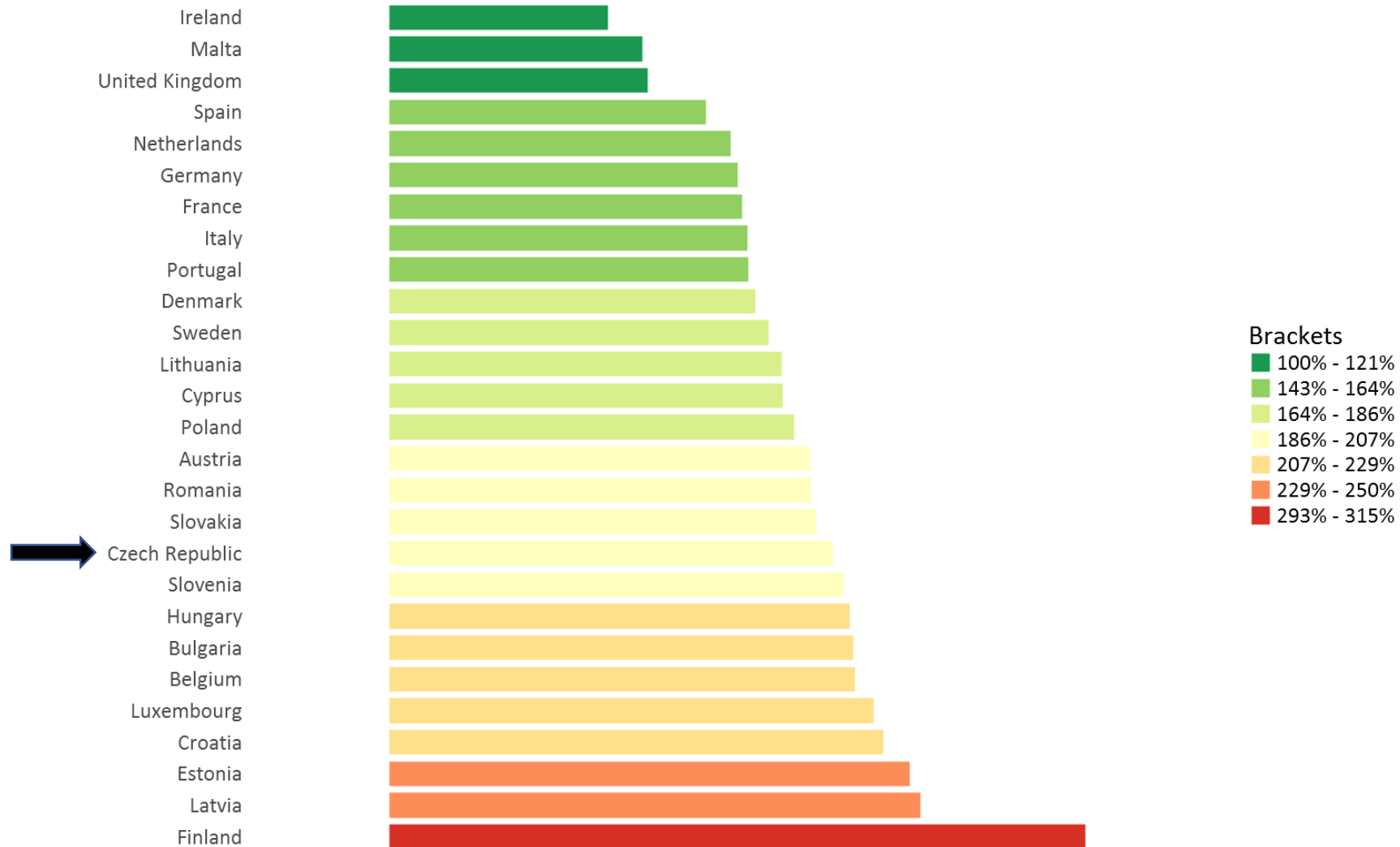
Source: European Environment Agency

Energy intensity

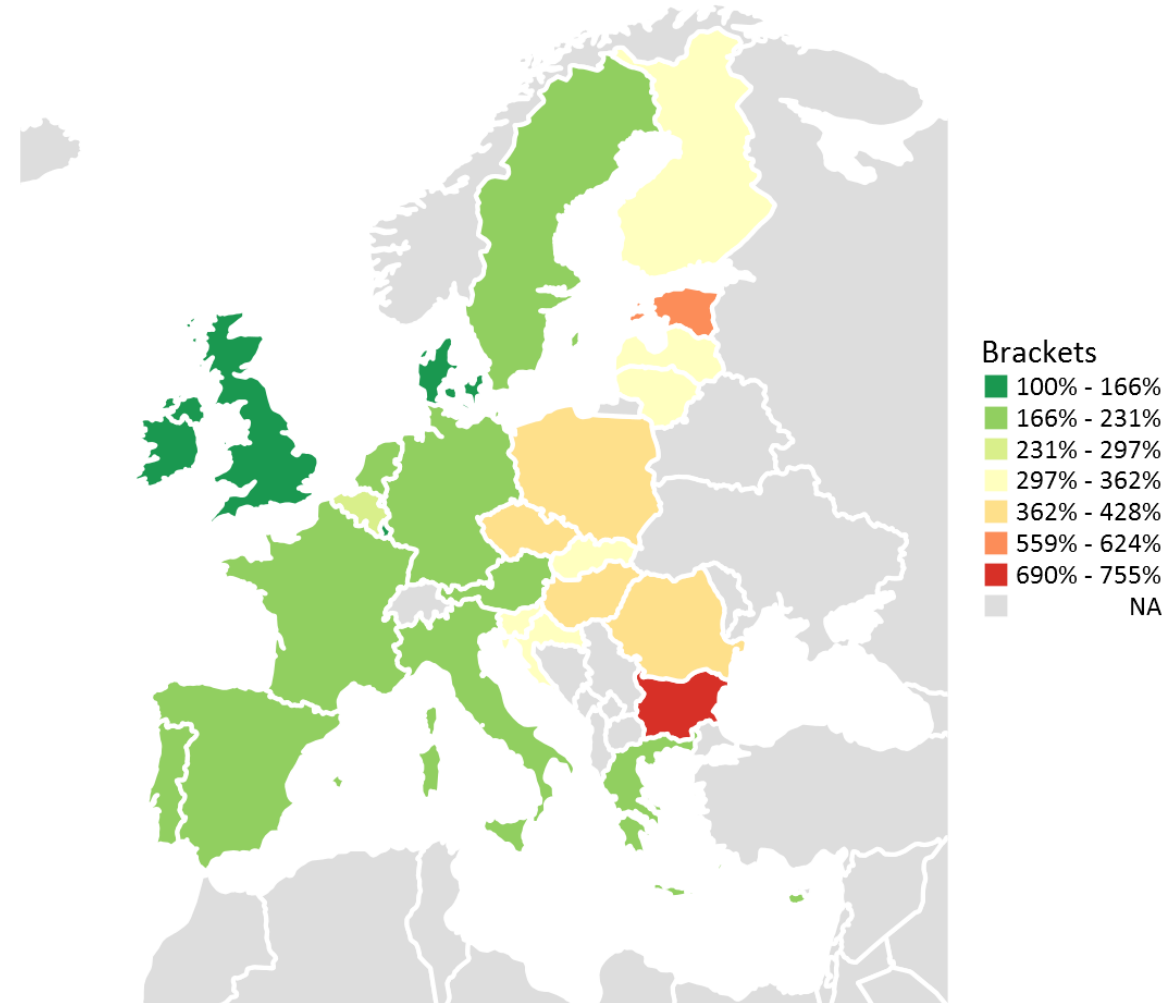
# Energy intensity 2015 – unadjusted



# Final energy intensity 2015 – adjusted

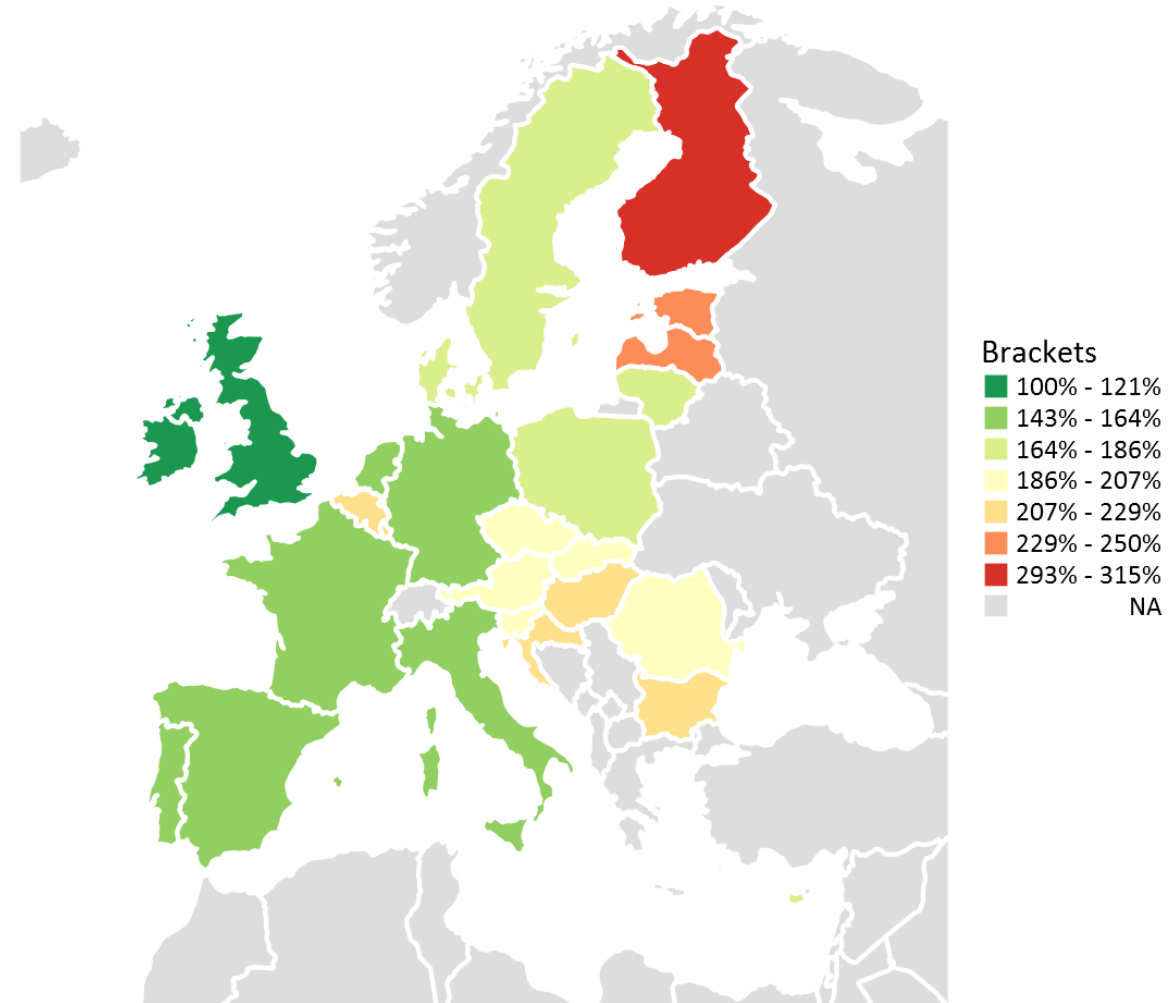


# Energy intensity 2015 – unadjusted



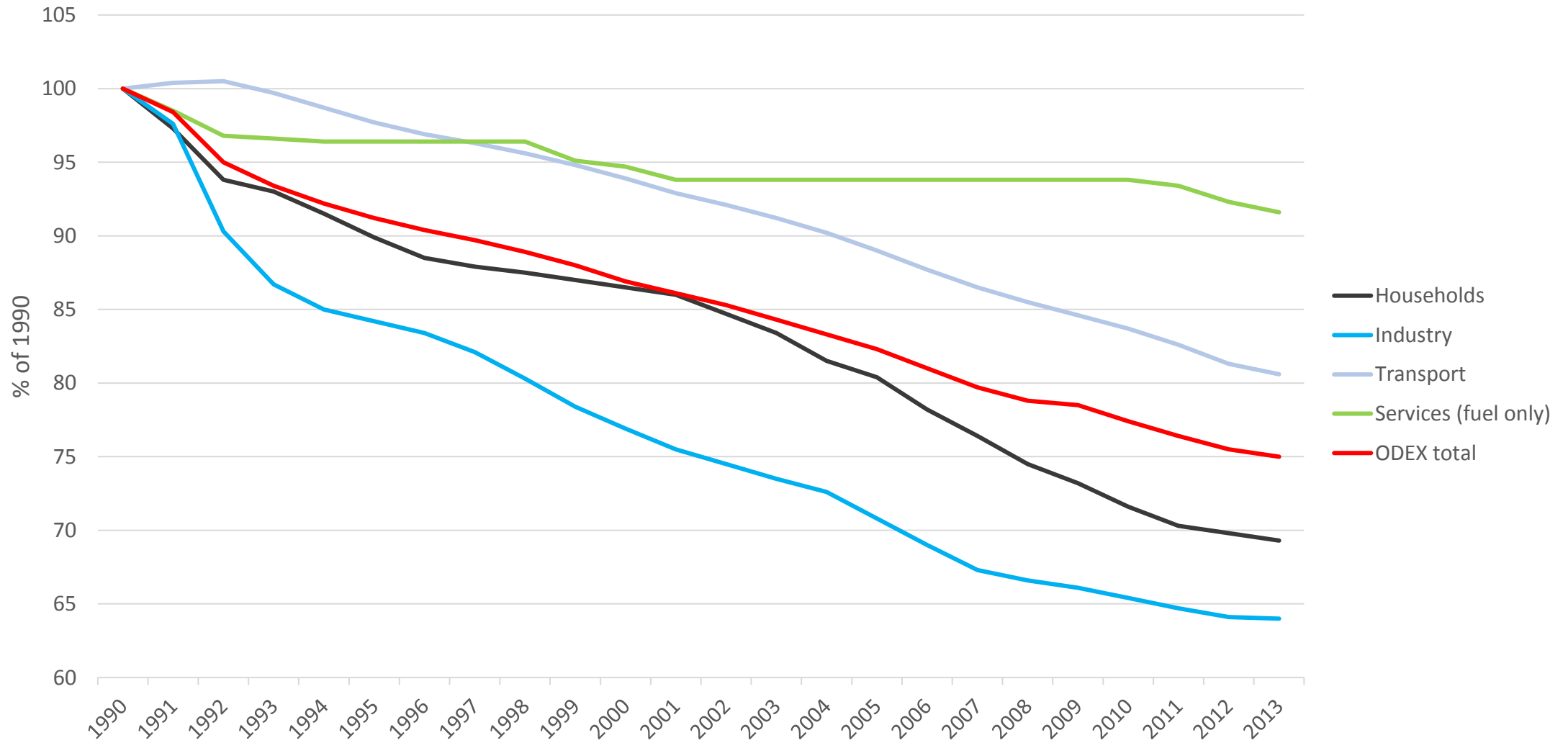
Source: Author, Eurostat data indicator tsdec360

# Final energy intensity 2015 - adjusted

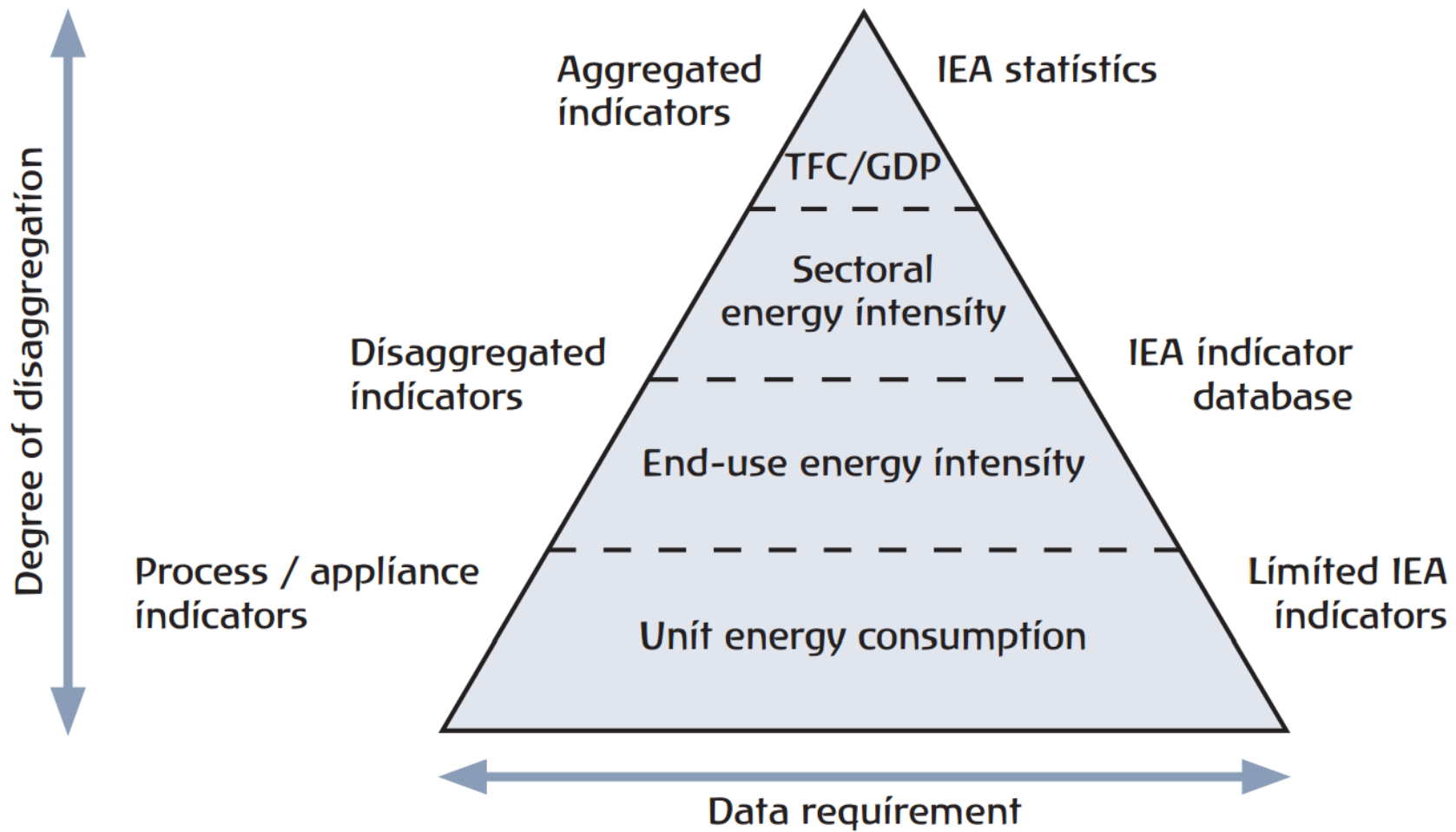


Source: Author, ODYSSEE-MURE data

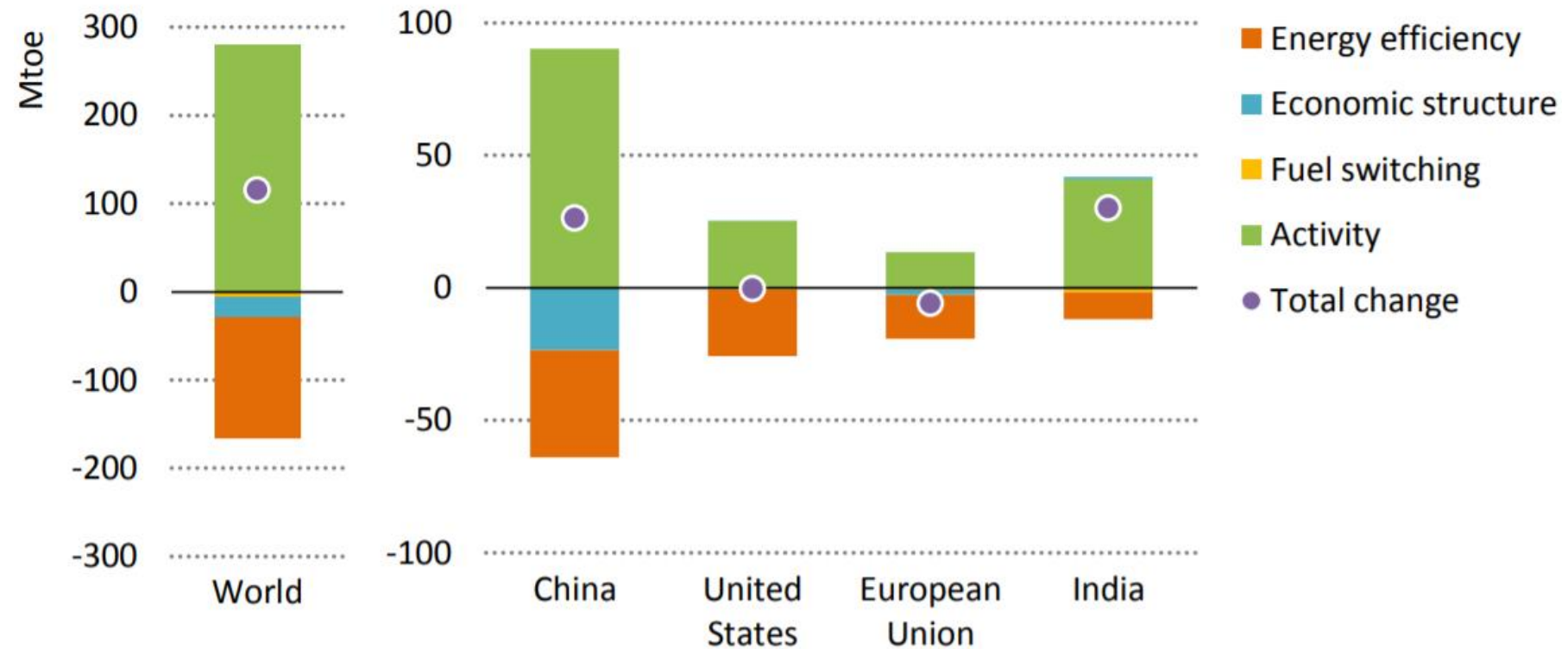




Source: European Environment Agency



# Disaggregation



Policy measures

What are technical/investment  
measures?

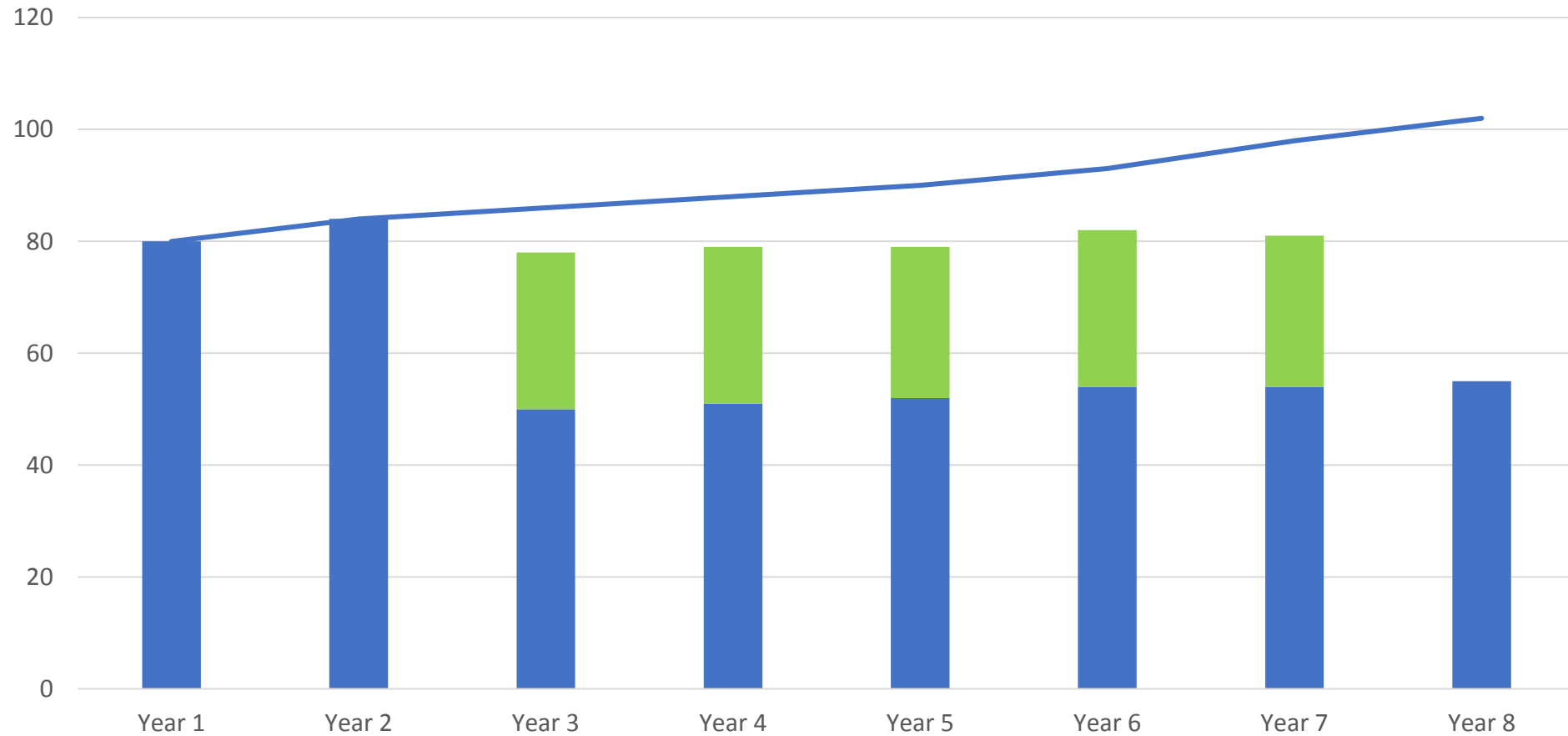
Financial instruments

Energy obligation schemes  
(White certificates)

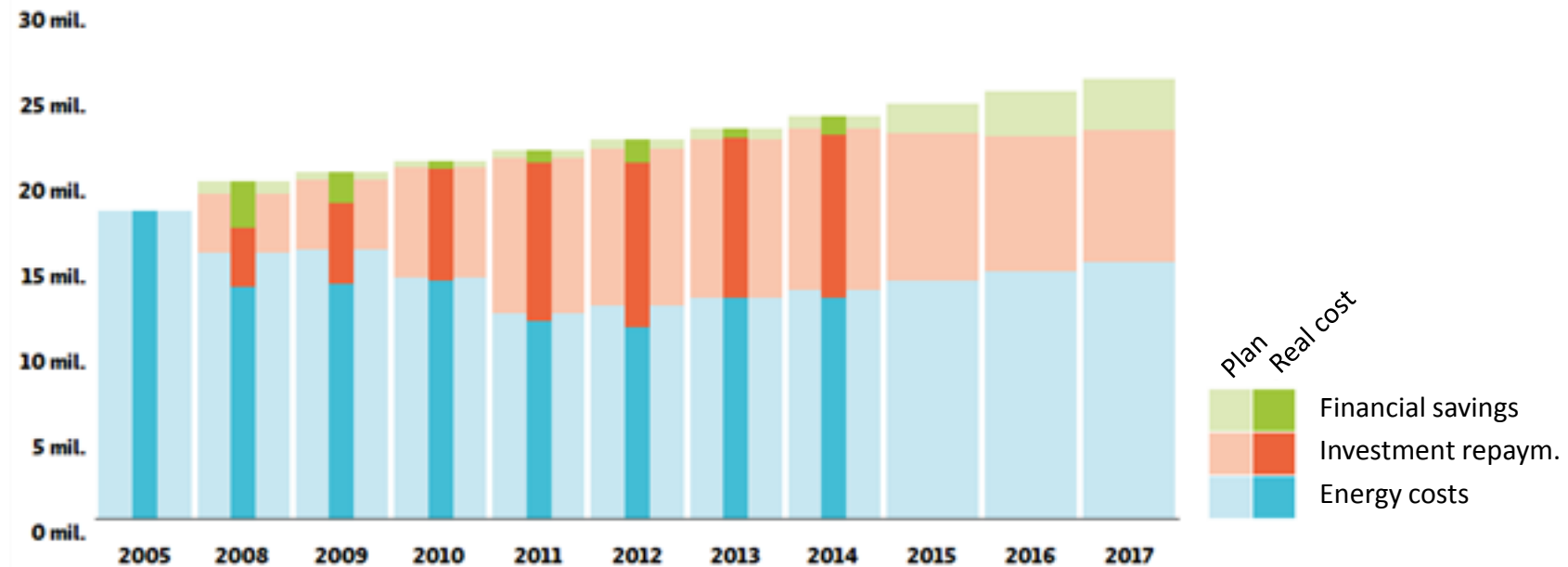
Energy services



# Energy services - logic



# National theatre in Prague



Taxes

Regulations

Other instruments