The risks of and opportunities for a significant acceleration of energy efficiency

Diana Urge-Vorsatz
Central European University
and
Global Energy Assessment
Key points

• Accelerate or get it right first...?
  • The lock-in risk related to efficiency policies related to infrastructure

• Insights for acceleration from GEA:
  • Integrate co-benefits into decision-making processes
  • Refocus subsidies
  • Supply and demand-side investments compete on a level playing field
Accelerate or make sure you get it right…?
The lock-in risk for energy efficiency policies related to infrastructure

Source: GEA Ch10
Co-benefits often amount to more than the energy savings

They often offer more attractive entry points into policy-making than social or climate goals

Among largest co-benefits:

- Energy security: e.g. 59% of Hungarian winter peak imports
- Employment: over 140,000 net jobs in Hungary alone for deep building retrofits
- Social welfare: helping alleviate poverty
- Health, less burden for women and children
- Increased access to energy services
Presently significant subsidies go to the energy sector
  • App USD 500 billion goes to fossil fuels annually
  • Further large amounts to energy poverty alleviation, employment protection, “environmental” goals
  • E.g. In Hungary close to USD1 bln annually, criticised even by the supply industry

Easier to reach many of their objectives through EE
  • End-use equipment to be considered as part of energy infrastructure

But end-use and supply investments right now not on par when investments are considered; level playing field is needed for end-use and supply resources to compete equally
Thank you for your attention

vorsatzd@ceu.hu
3csep.ceu.hu
www.Globalenergyassessment.at
How to accelerate?
Redirect subsidies

- Acceleration of efficiency is very costly: ....
  - ...but it pays back...
Investment costs and energy cost savings for a state-of-the-art building final energy use scenario.

14-18 trl.USD of investment vs. 58 trl.USD of energy cost savings globally.

Source: GEA Ch10
Supplementary slides
Energy subsidies in Hungary

Energy subsidies

- **Biofuel**: relatively little CO2 emission mitigation at a high cost
- **District heating VAT discount**: further decreases energy efficiency
- **Coal subsidy**: artificially increases the competitiveness of high carbon intensity energy
- **Gas subsidy**: decreases energy efficiency and competitiveness of renewable heat
- **Feed-in tariff for co-generation**: predominantly subsidy of gas based co-generation, decreases competitiveness of renewable heat

- ▶ 300 Bn HUF state investment to a new lignite plant.
- ▶ 1 Mt additional CO2 emission compared to a BAT gas turbine

Source: slides from Mr. Laszlo Varro, Strategy Director at MOL