Thoughts related to future EU strategy on energy saving – with a focus on buildings

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1. Focus of policies from picking low-hanging fruit should be shifted to implementing more strategic solutions (partially due to the lock-in effect).

2. Ramping up building renovation rates are important; but much more important is the level of energy savings per renovation; due to the lock-in effect and maximising co-benefits.

3. Many socially cost-effective, strategic measures will not become sufficiently attractive for private decision-makers; thus govt/EU intervention is needed to make them happen (such as financing mechanisms).
Justification: the lock-in effect
Building heating and cooling energy use
development in Western Europe, state-of-the-art
scenario, vs. floor area development

Work in progress

Exact numbers still changing
The lock-in effect in detail for Western Europe

Heating and Cooling Final Energy, state-of-the-art scenario

Heating and cooling Final Energy, suboptimal scenario

Work in progress

Exact numbers still changing
EU must focus on deep retrofits and cannot afford suboptimal ones

- Otherwise app. **43%** of today’s heating&cooling emissions will be **locked in** by 2050; making 80% - 95% targets either unachievable or very expensive to achieve.

- Other co-benefits are also largest with deep retrofits:
  - **Energy security**: January natural gas import needs in Hungary can be cut by app. **60%** by 2030, as opposed to only 18% if suboptimal renovations are done.
  - App. **130,000 – 180,000 net jobs** can be created in Hungary alone through a deep retrofit program; vs. app. 40,000 for a suboptimal one.
  - **Fuel poverty** can entirely be eradicated through deep retrofits; while just eased through suboptimal ones.
  - **Affordability**: population much less vulnerable to NG price volatilities.
  - **Health** and thus **productivity gains** have shown to amount to much larger $ savings than direct energy cost savings.
Thus...

- Cherry-picking (~ focusing on “cost-effective” solutions mainly) results in major lock-in effects and significantly reduced benefits.
- Cost-effectiveness is wrong indicator while co-benefits and all externalities are not properly integrated into cost-benefit assessments.
- EU should focus on strategic solutions rather than short-term cost-minimisation; to really maximise societal cost-effectiveness…
Financing mechanisms and/or support unavoidable for long-term infrastructure investments

- While many long-term infrastructure investments pay back and are societally very cost-effective, they are not c-e for private decision-makers
  - Payback time (~discount rate) gap
  - Co-benefits are not all enjoyed by private decision-makers
- Therefore public support, or at least financing mechanisms are essential
  - E.g. zero- or very low interest loans
  - Focusing the Structural/Cohesion Funds (even more) on this
  - Directing CC-related fees/taxes/carbon-market revenues
- Deep renovations will not happen without certain public/EU interventions…
- …making many energy policy targets difficult/impossible to achieve by 2050
Thank you for your attention

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They just keep promising this global warming; but they won’t keep this promise of theirs either…

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