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

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UNIDO UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Federal Ministry for European and International Affairs

IIASA International Institute for Applied Systems Analysis

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Key points

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- **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**

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Accelerate or make sure you get it right...? The lock-in risk for energy efficiency policies related to infrastructure

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Source: GEA Ch10

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How to accelerate? Integrate co-benefits into the cost-effectiveness assessmets

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- **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**

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How to accelerate? Subsidy issues and level playing field for investments

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- 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

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Thank you for your attention

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How to accelerate? Redirect subsidies

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- Acceleration of efficiency is very costly: ....
  - ...but it pays back...

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Investment costs and energy cost savings for a state-of-the-art building final energy use scneario

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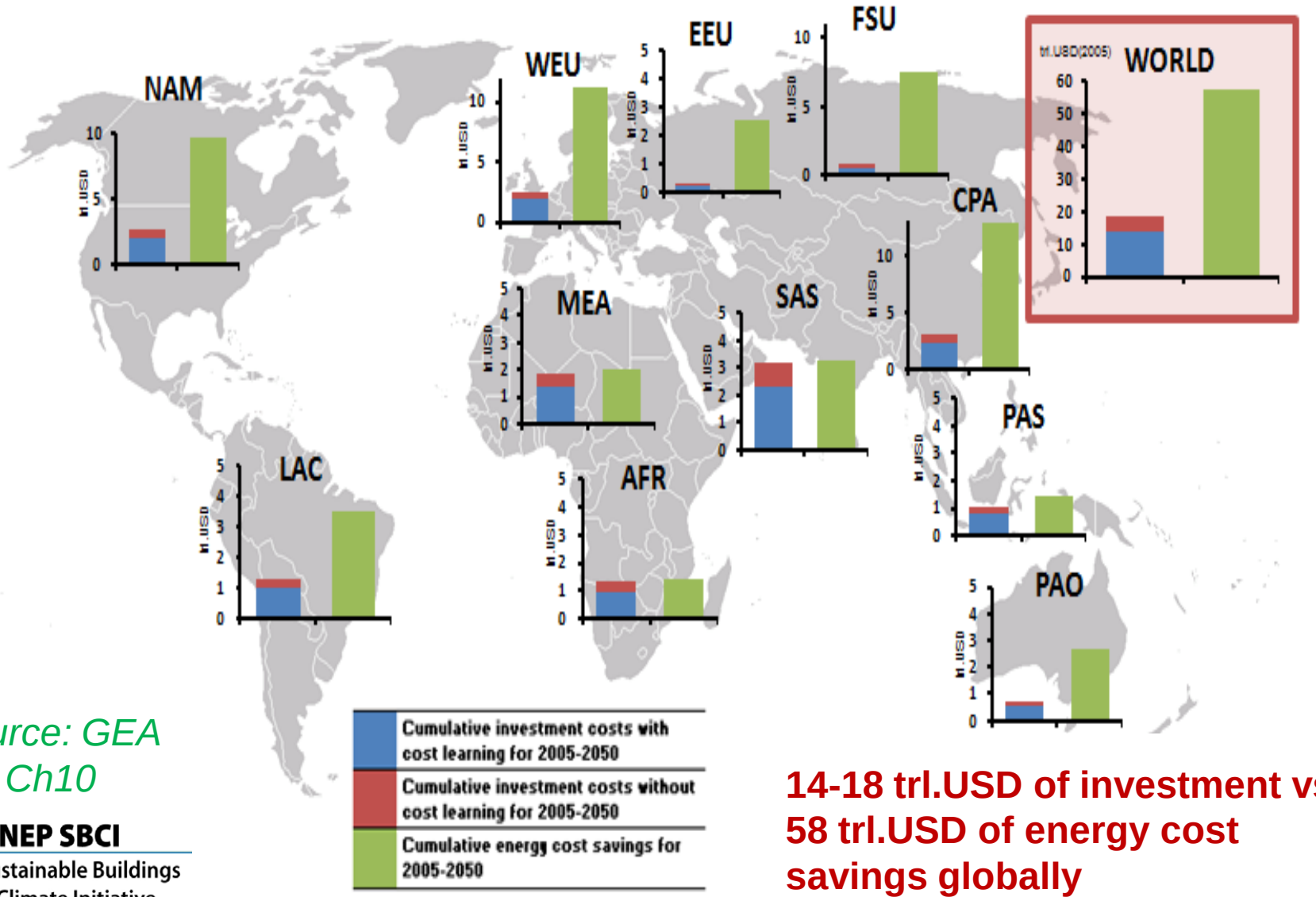

Source: GEA Ch10

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

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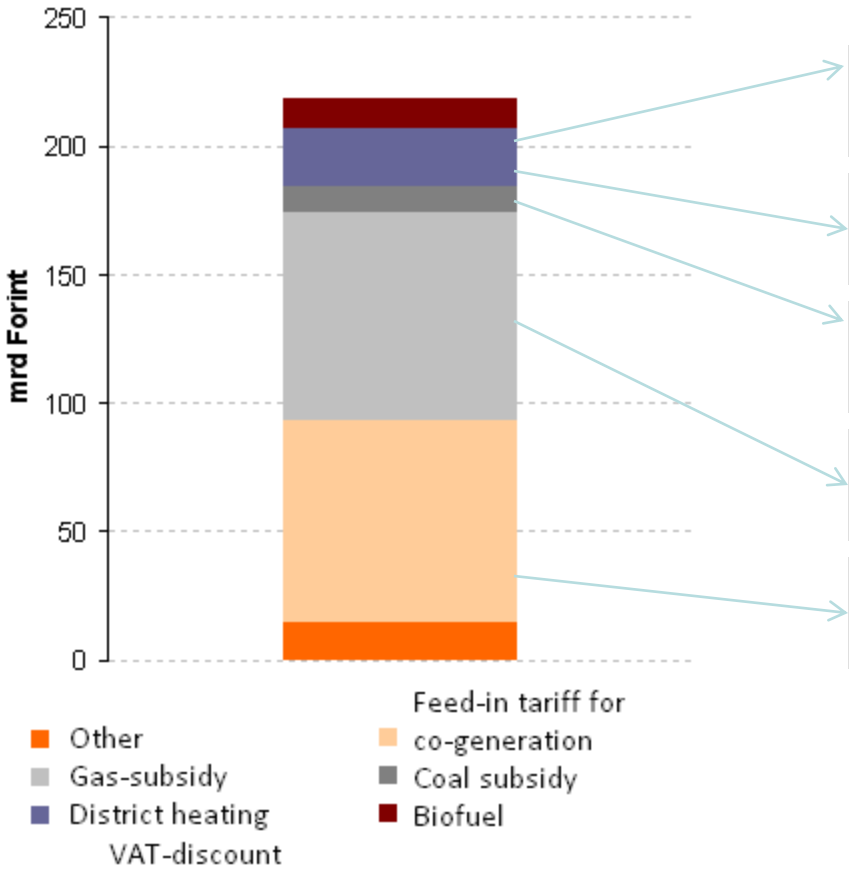
Supplementary slides

Energy subsidies in Hungary

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

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, decresaes competitiveness of renewable heat

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