CENTRUM SPOLOČENSKÝCH A PSYCHOLOGICKÝCH VIED SAV

Prognostický ústav Slovenskej akadémie vied

Smart? Energy efficiency & energy savings

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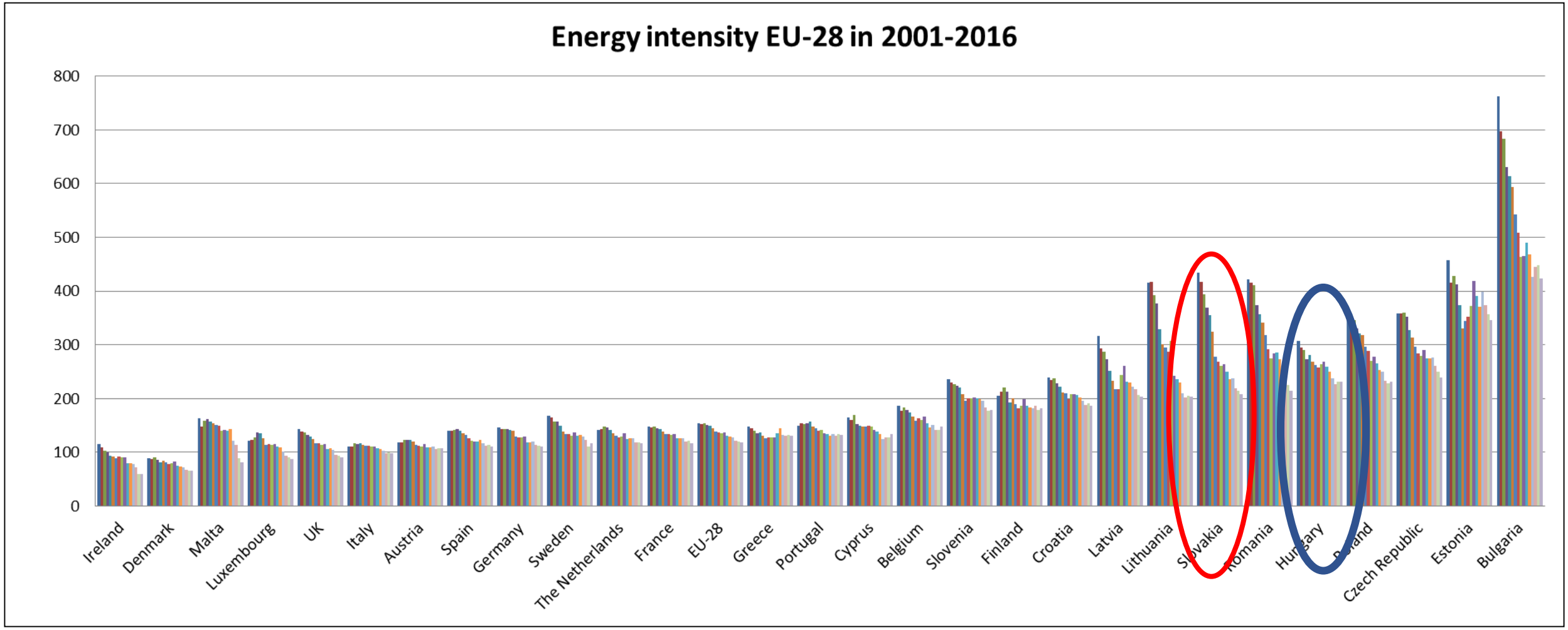
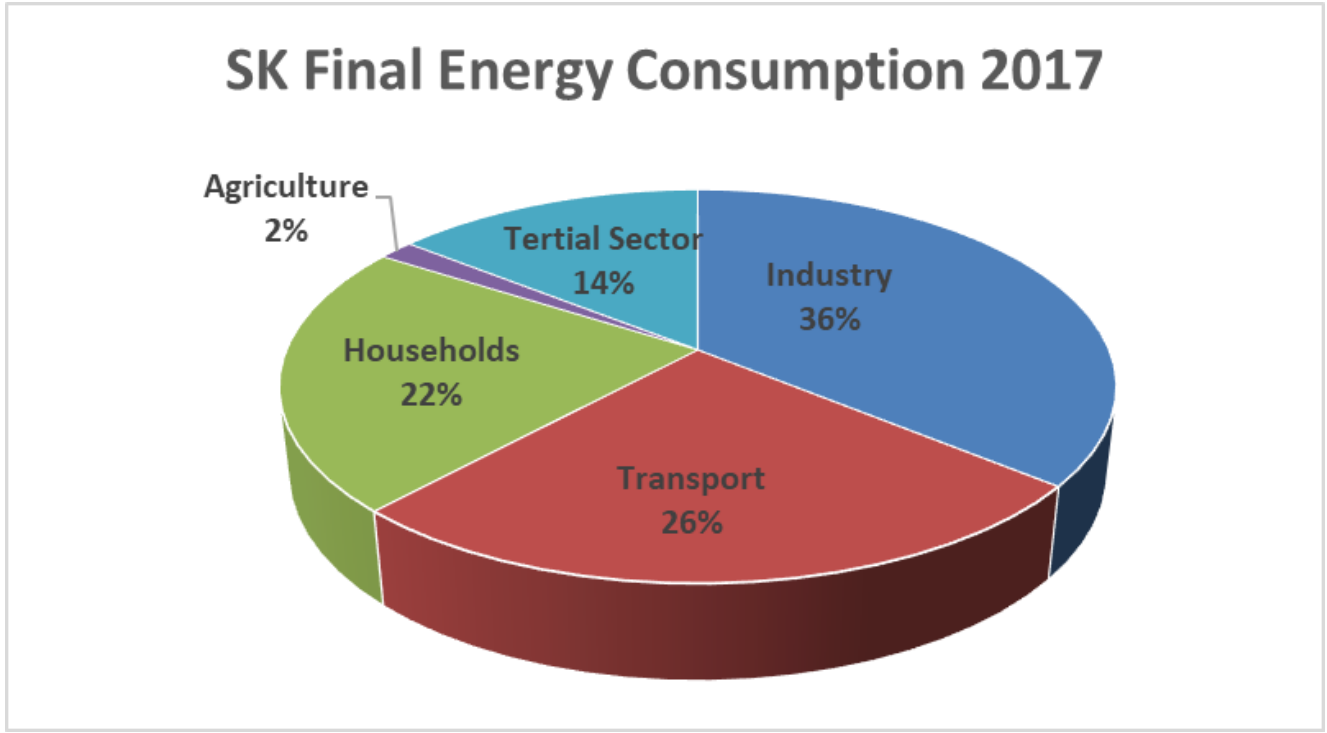
CEEC, 19 November 2019, Bratislava



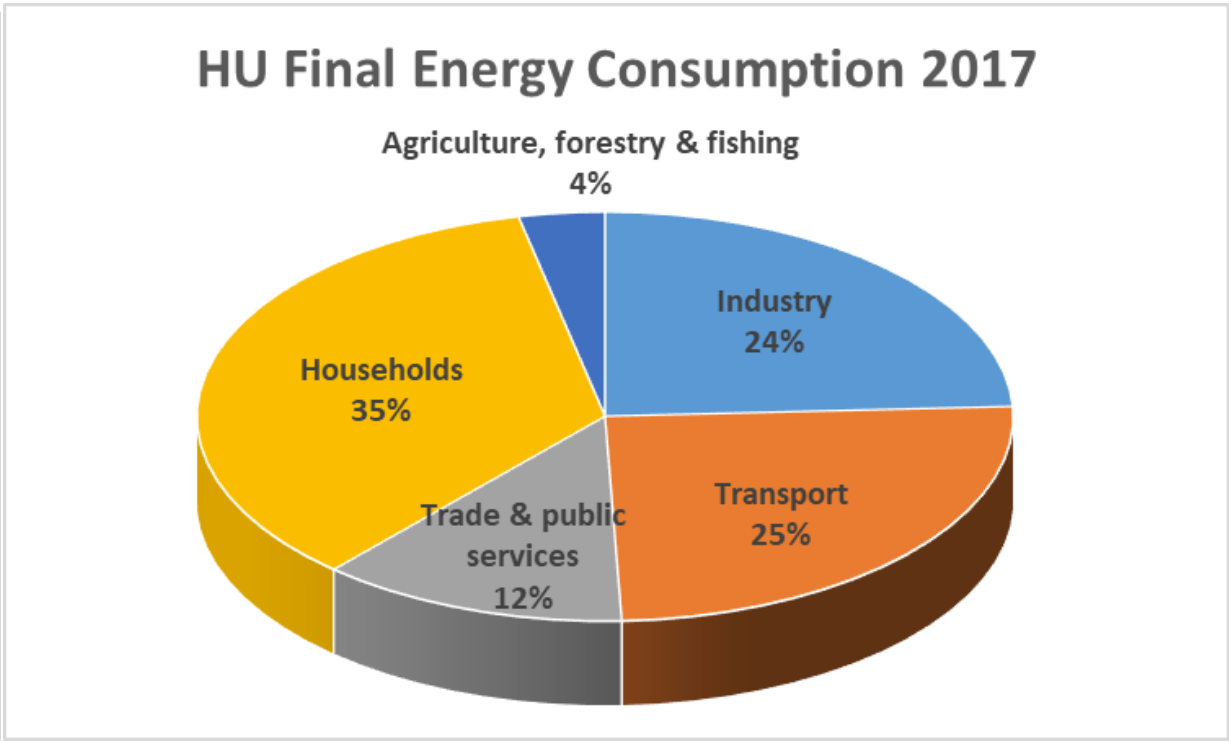
Eurostat, MH SR 2018

Final energy consumption

ŠÚSR, KSH 2019



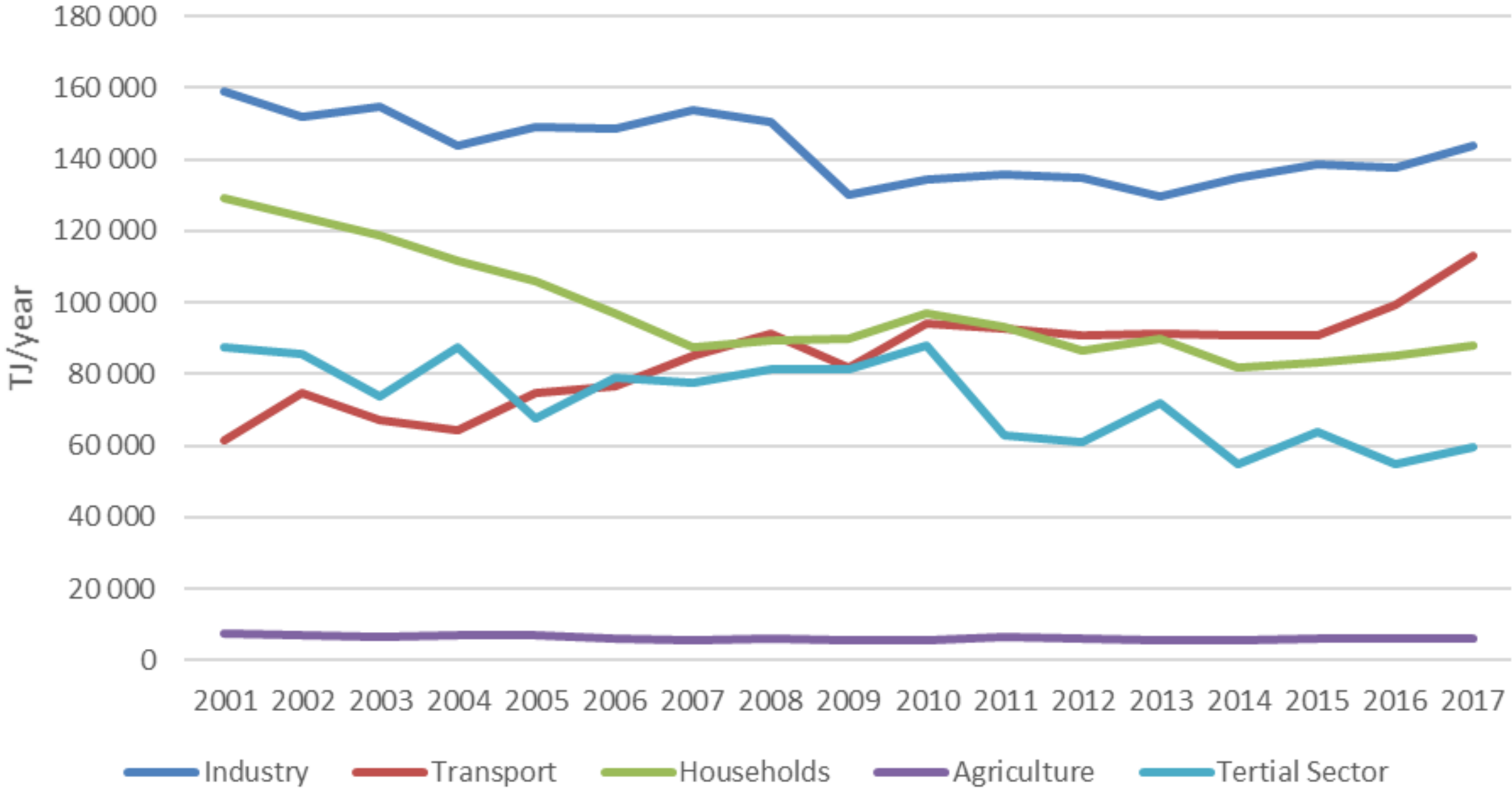
410 PJ



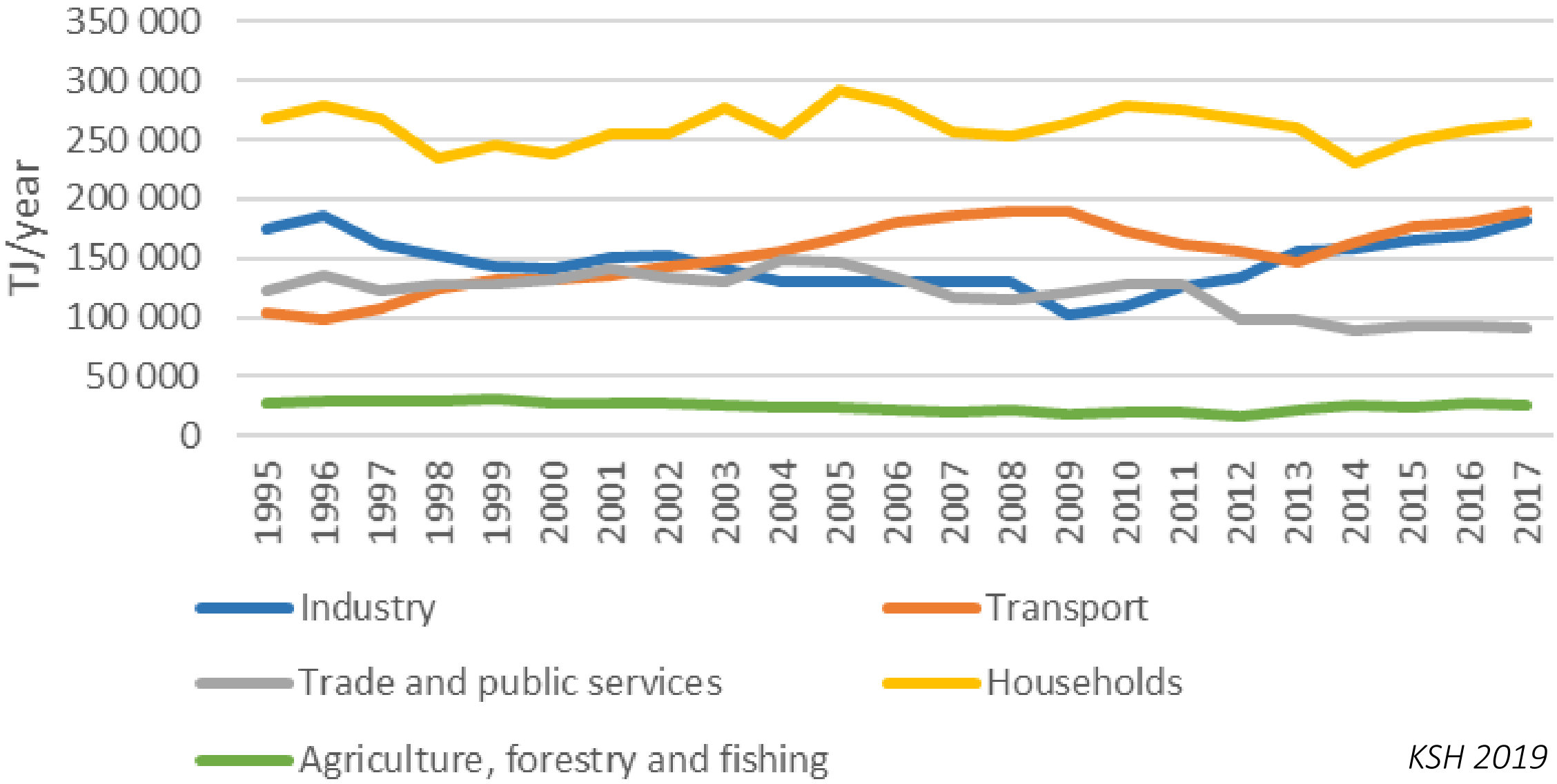
751 GJ

SK Final Energy Consumption 2001-2017 (TJ)

ŠÚSR 2017



HU Final energy consumption 1995-2017 (TJ)



KSH 2019

Inventory is the basis

Inventory of significant energy uses

→ City level: buildings, vehicles, energy sources…

State level: industry, energy sector, transport, households, public sector, services, agriculture.

List of priorities for investment

→ -> taking into account energy savings potential of each category, necessity from retrofit & its actual utilisation

Financial analysis

→ -> cost-benefit analysis, taking into account initial investment of measures, but also reduced energy bill.

-> investment intensity of diff. measures

-> sources of financing

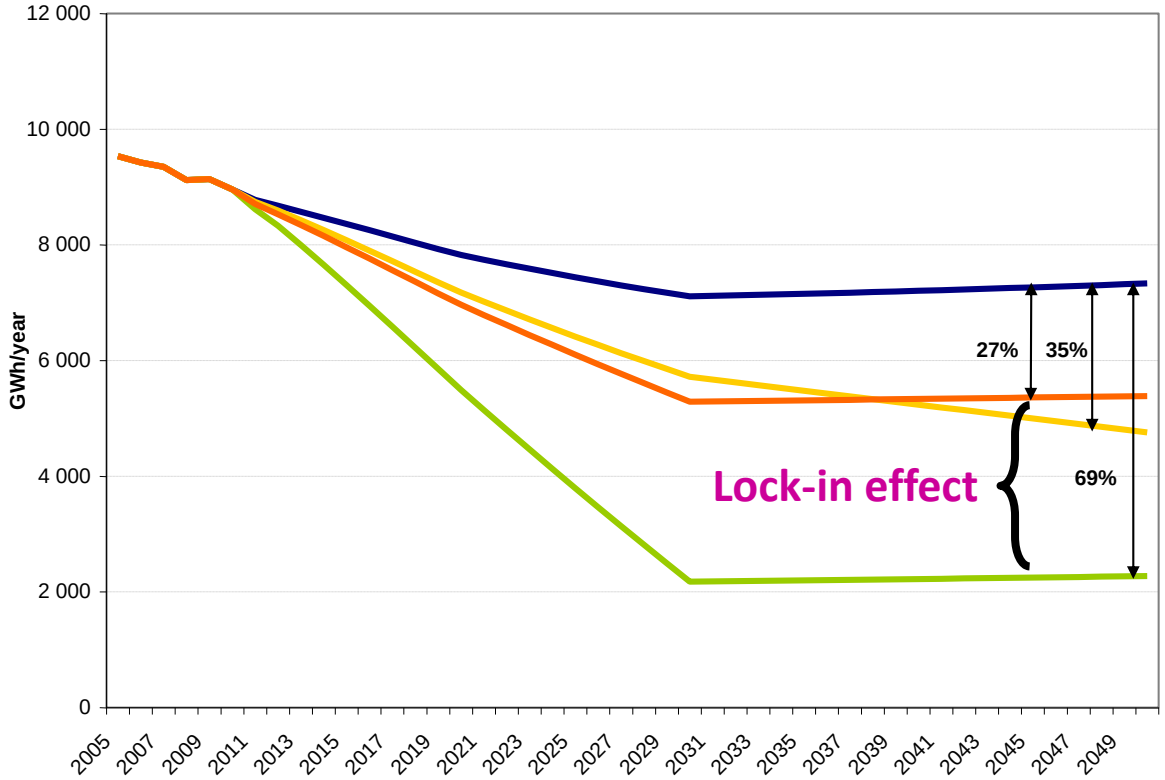
Long-term investment strategy

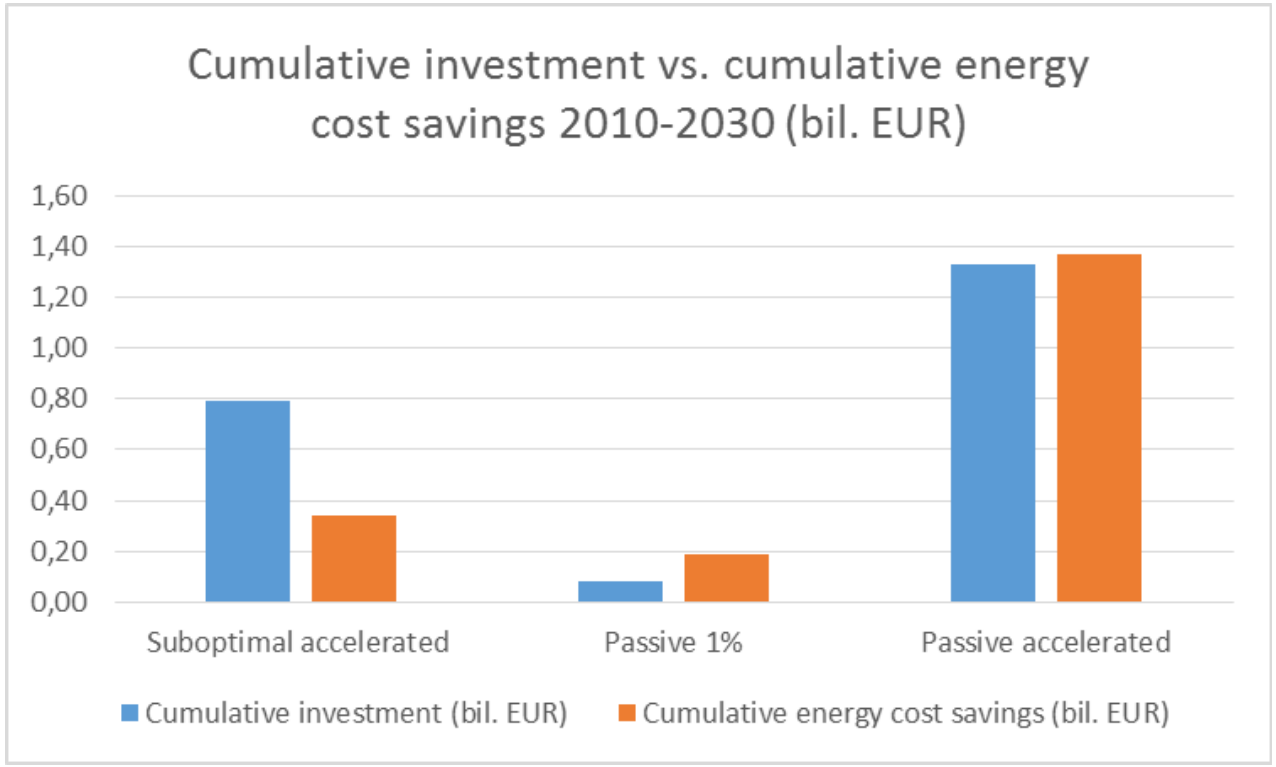
→ -> WHAT to renovate
-> WHEN
-> FROM WHAT sources
-> to which level of ENERGY SAVINGS

Approval

→ -> needed for ensuring its continuity & commitment

Energy savings potential in Hungarian PB

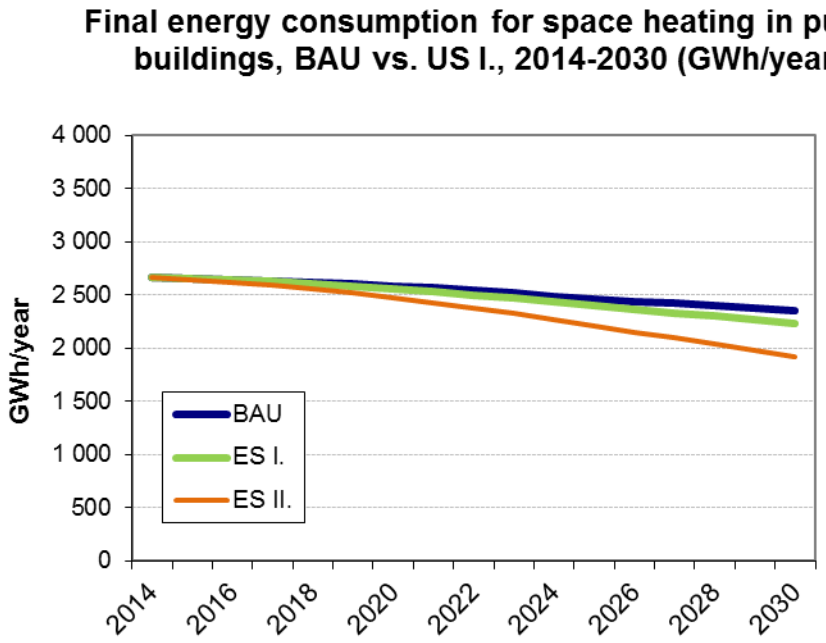


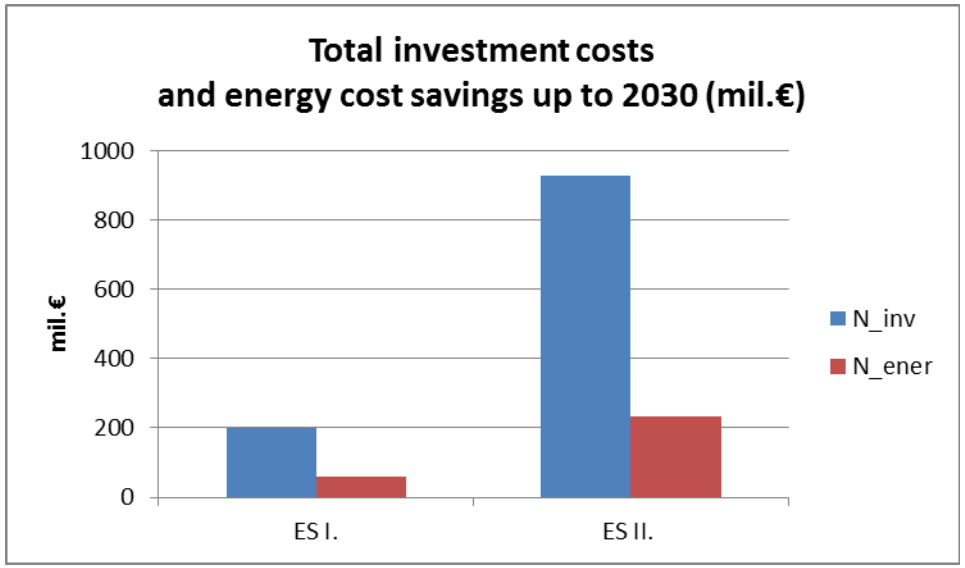


Source: Korytarova (2010)

Source: Korytarova et al. (2015)

Slovakia: Energy savings - 2030

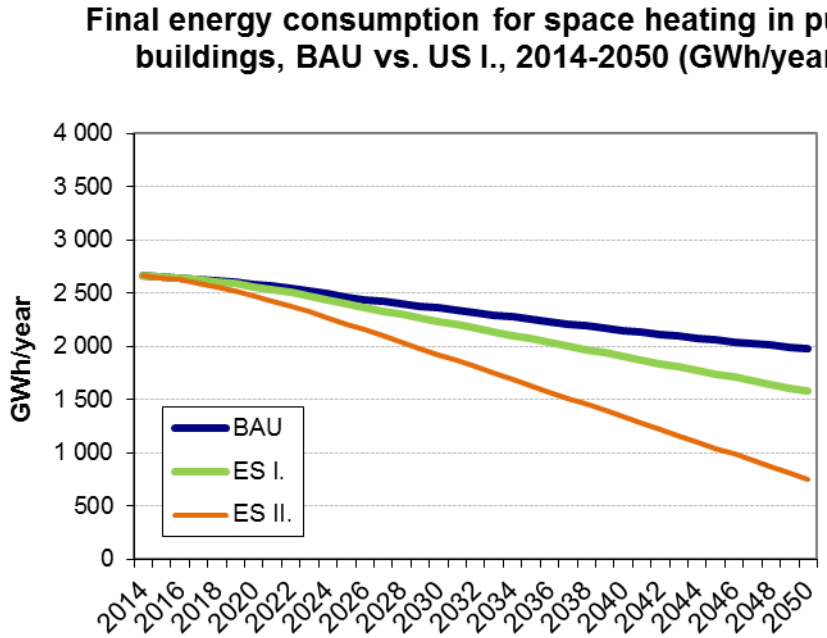


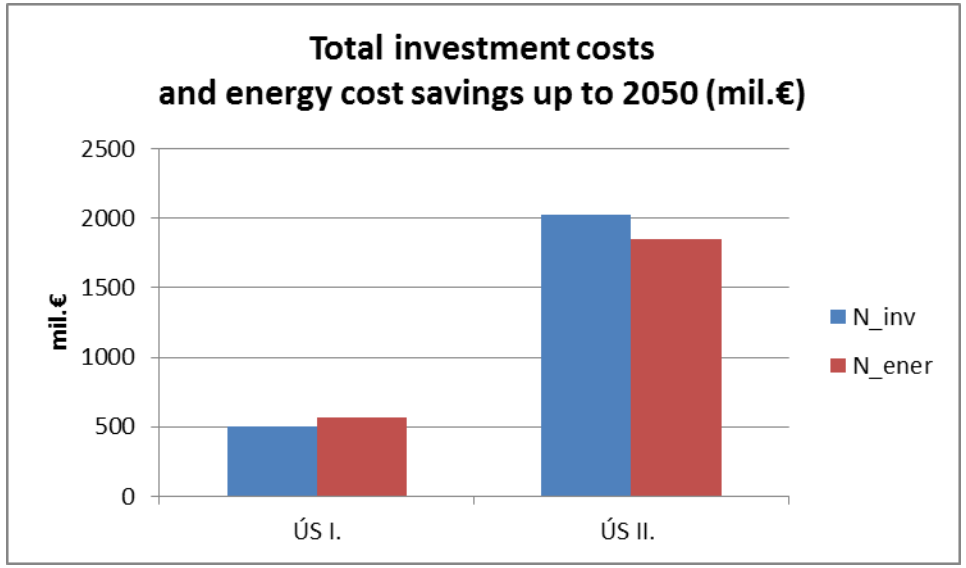


- The results showed that the set timeframe is too short to generate energy cost savings comparable to the investments needed

Source: Korytarova et al. (2015)

SK Energy savings: 2050

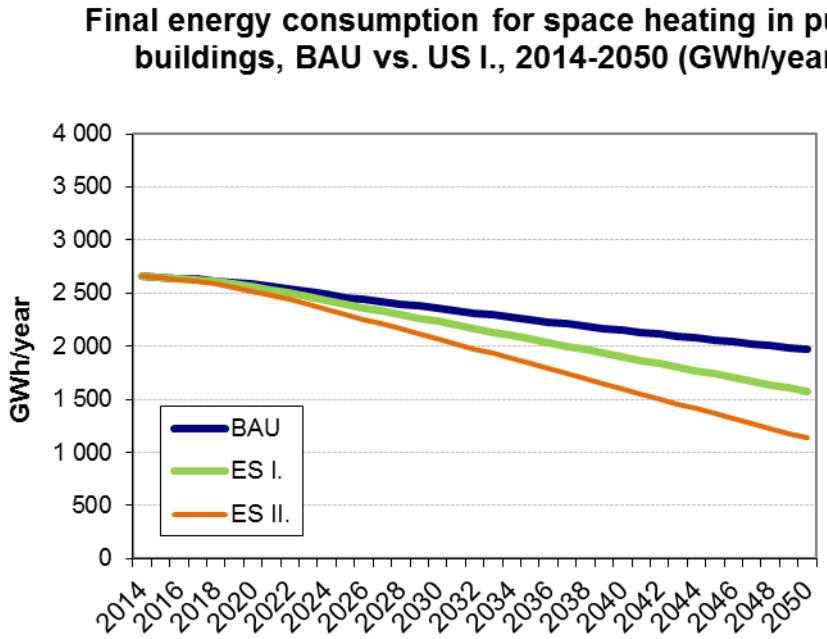


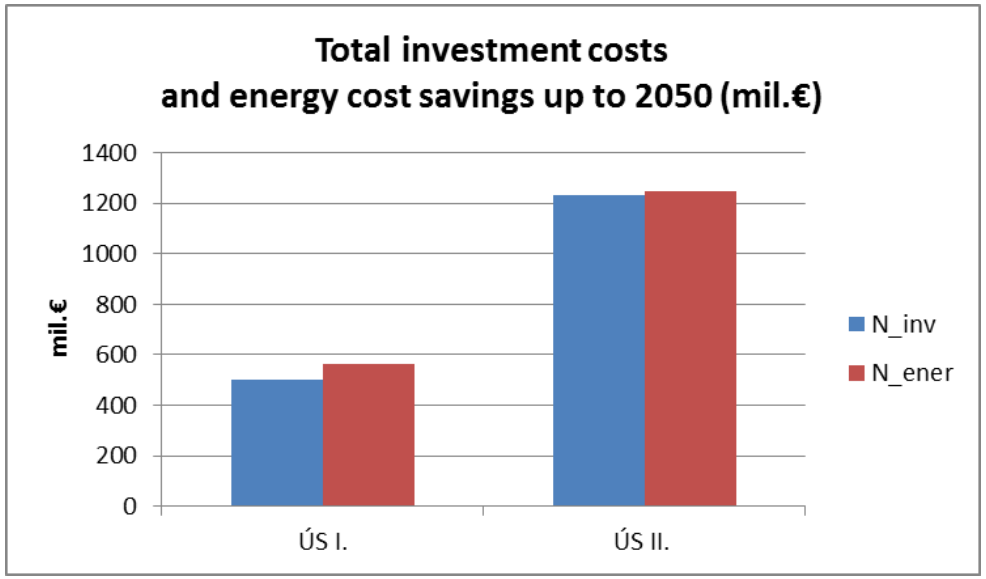


- By 2050 the energy cost savings exceeded the investment costs only in ES I.
- This implied that the assumed retrofit rate of 3% is too costly.

Source: Korytarova et al. (2015)

SK Energy savings: 2050 (2)





- Further research searched for the cost-effective level of retrofit rates.

Conclusions

- Large energy savings potential untapped
- Municipalities can play an important role
- However – smart ES strategy and investment plan needed
- In order to avoid lock-in effect

- Measures neccessary at national and regional/city level:
- A) National strategy
  - Incentives to decrease additional costs
  - Pilot projects
  - Additional financial mechanism (incl. sanctions)
  - Enforcement of legislation
- B) Inventory, investment strategy, goals & commitment.

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