



Hungarian –Polish conference on renewable energy
Miskolc 28-29 April 2010

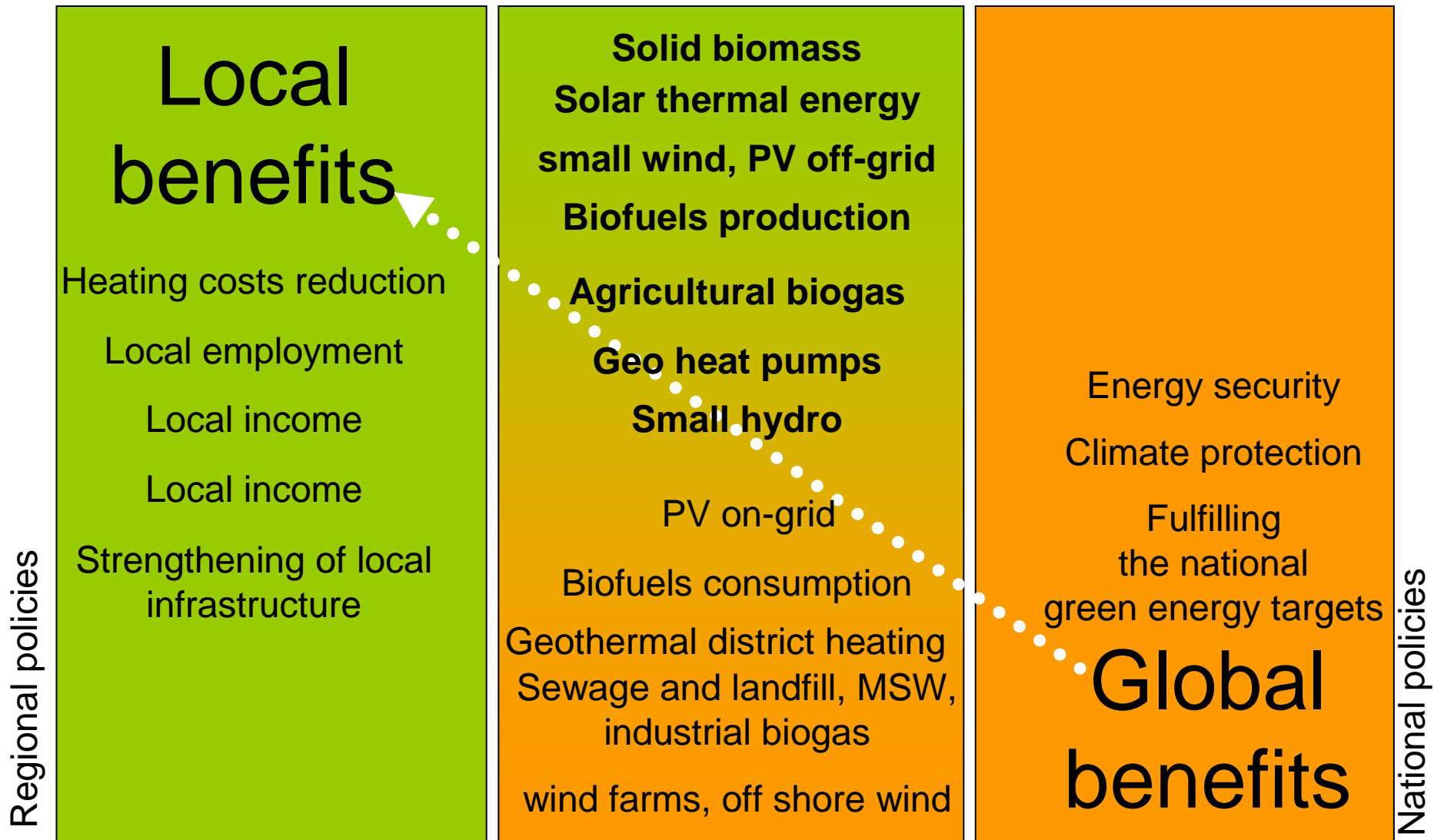
Panel II. Social Green Energy

Renewable energy in Central and Eastern Europe – possible utilisation in the agricultural sector

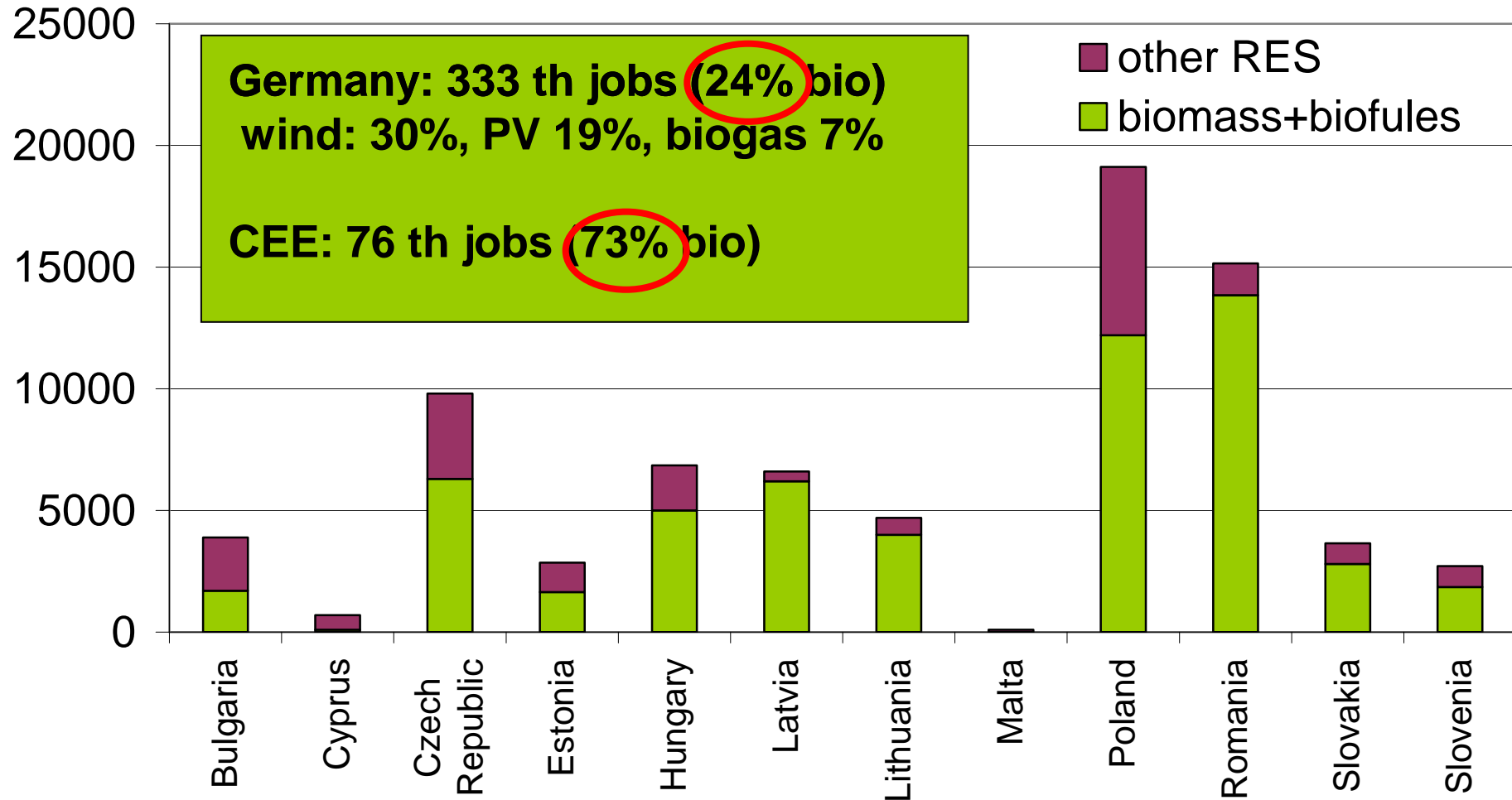
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Importance and challenges of *decentralise* RES for rural areas



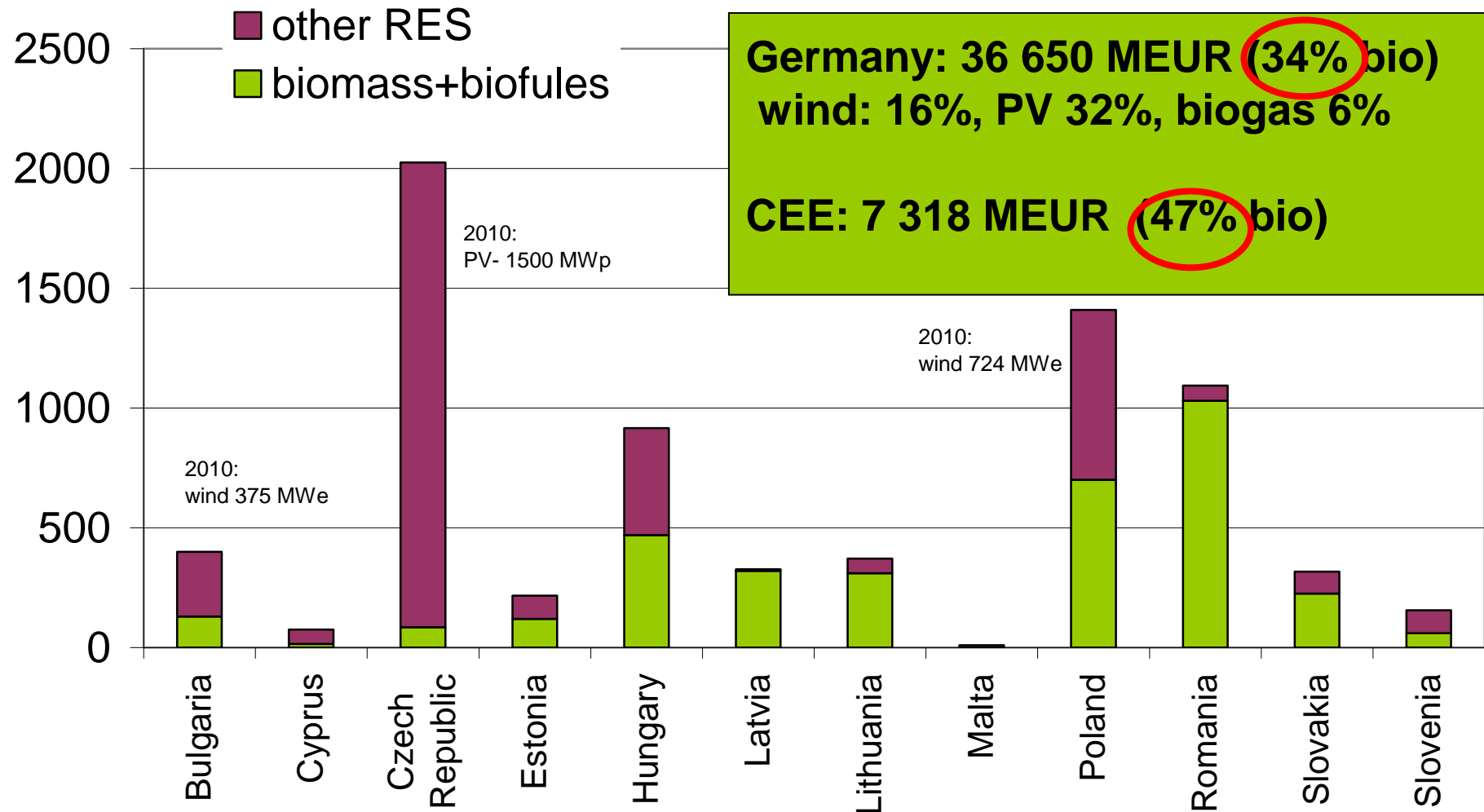
RES employment in CEE (2009)



In CEE employment is created prevailingly by biomass fuel production, employment in more advanced technologies should be encouraged

RES turnover in CEE (2009)

M EUR



Turnover is generated prevalingly by biomass fuel supply and centralised/imported equipment (wind, PV)



Only RES targets?

Different RES development aims are behind national (NREAP) and regional policies

For rural development (employment, turnover, value added) regional policies are more effective e.g.:

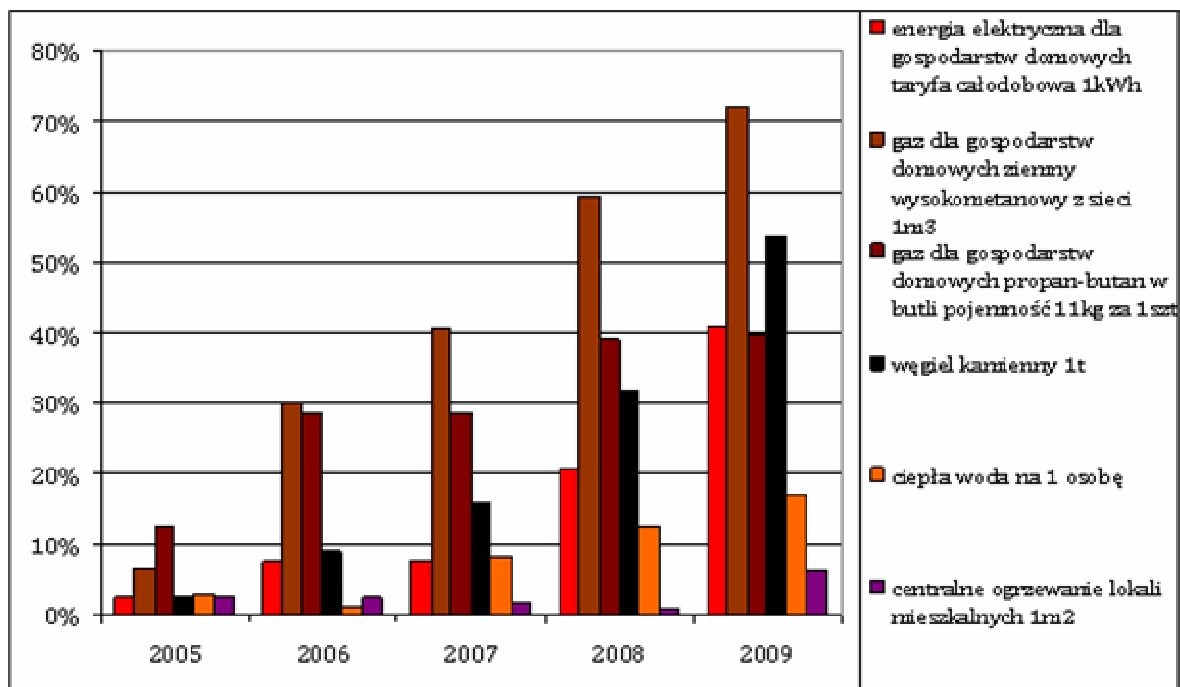
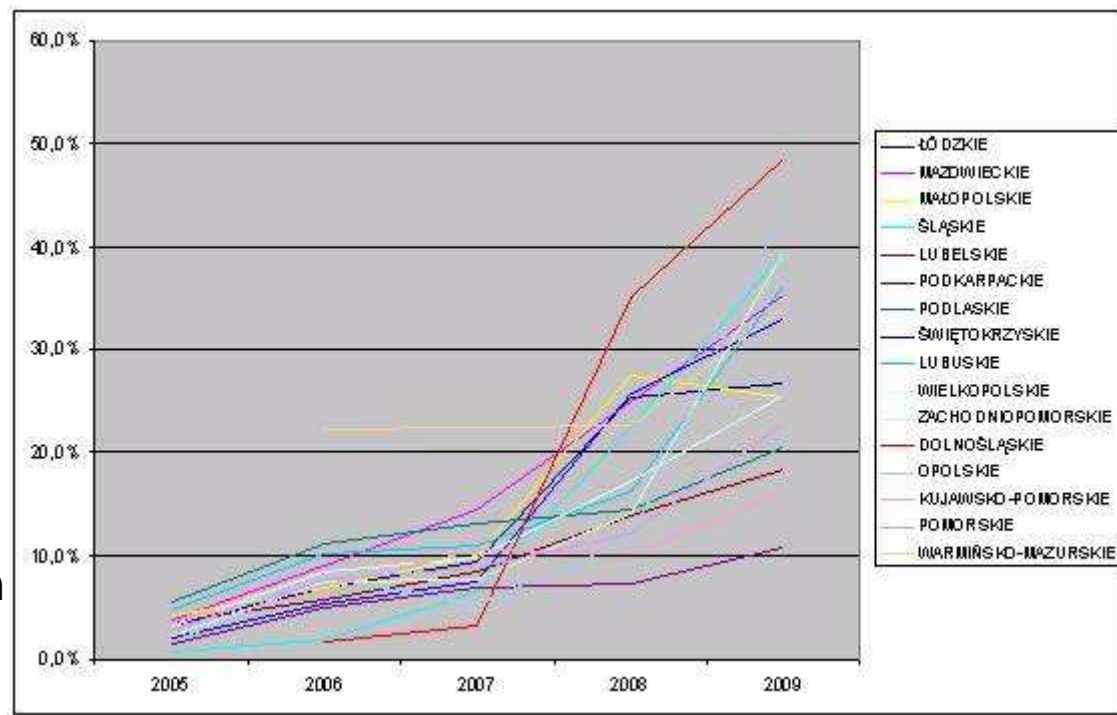
- Jász-Nagykun-Szolnok county
- Mazovian Voivodship



Quality of energy supply/ energy security in CEE rural areas

- Liberisation of the energy markets is followed by lowering of the quality of electricity and gas supply in remote areas
- Demand for electricity increases, demand for heat decreases
- Prices for energy in rural areas increase

Increase in electricity prices in rural areas since 2004 in Poland



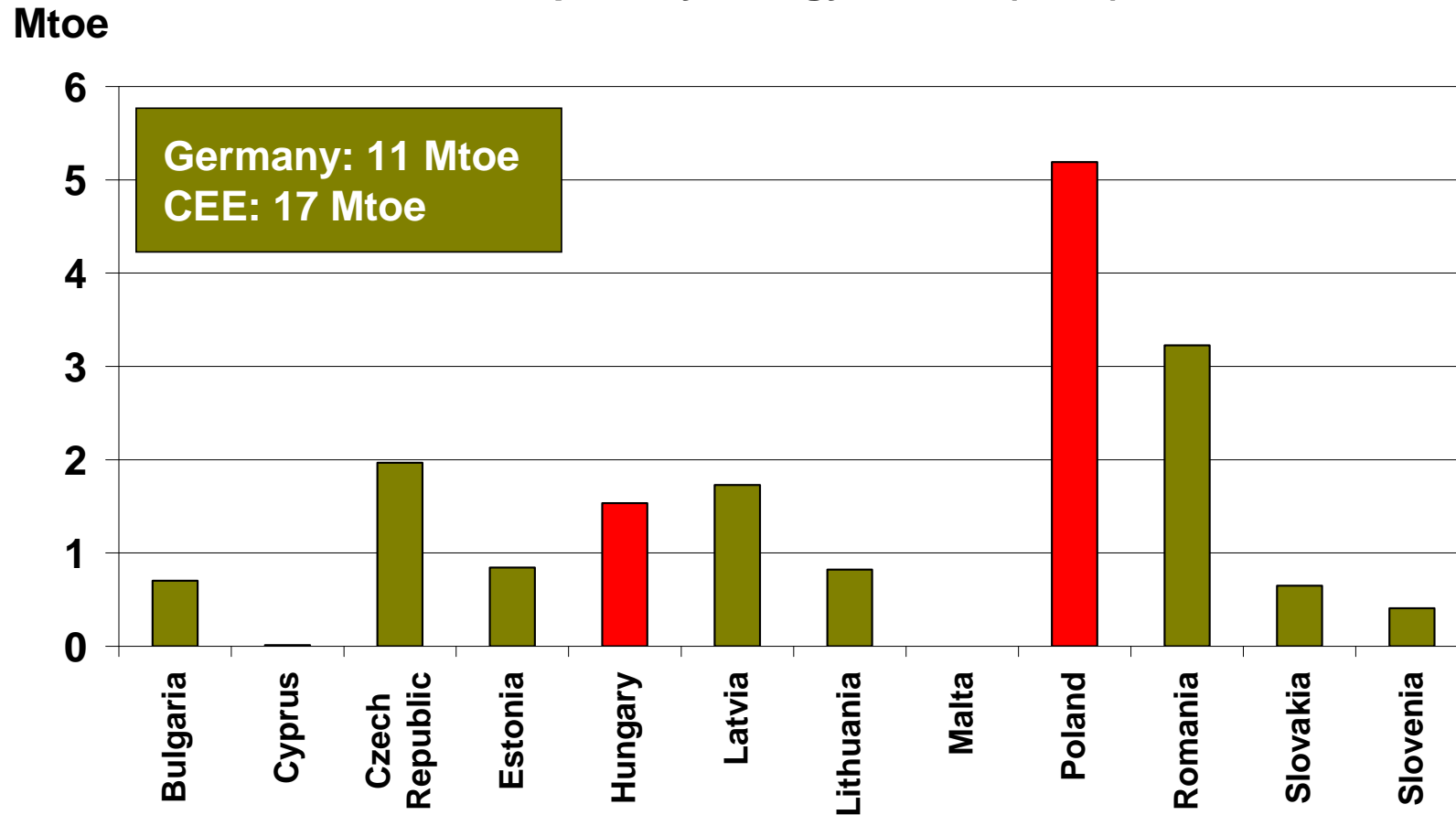
Increase in energy prices since 2004 in rural areas in the South of Poland



Are the alternative income/ employment opportunities created by biomass attractive for rural areas

- The food prices are increasing thus the motivation to look for additional income (e.g. energy crops) is less attractive
- CAP support has been withdrawn
- The sustainability criteria (RES directive) for biofuels and competition with biofuels from outside Europe (Brazil, Malaysia) make this alternative even less attractive

Biomass primary energy in CEE (2009)



S: Reduction of heating costs, energy crops: local jobs and income

W: Resource availability, low quality furnaces/boilers

O: New more efficient equipment, replacement of forest biomass with agri biomass

T: Competition for resources (cofiring)/ energy crops dependent on the external subsidies



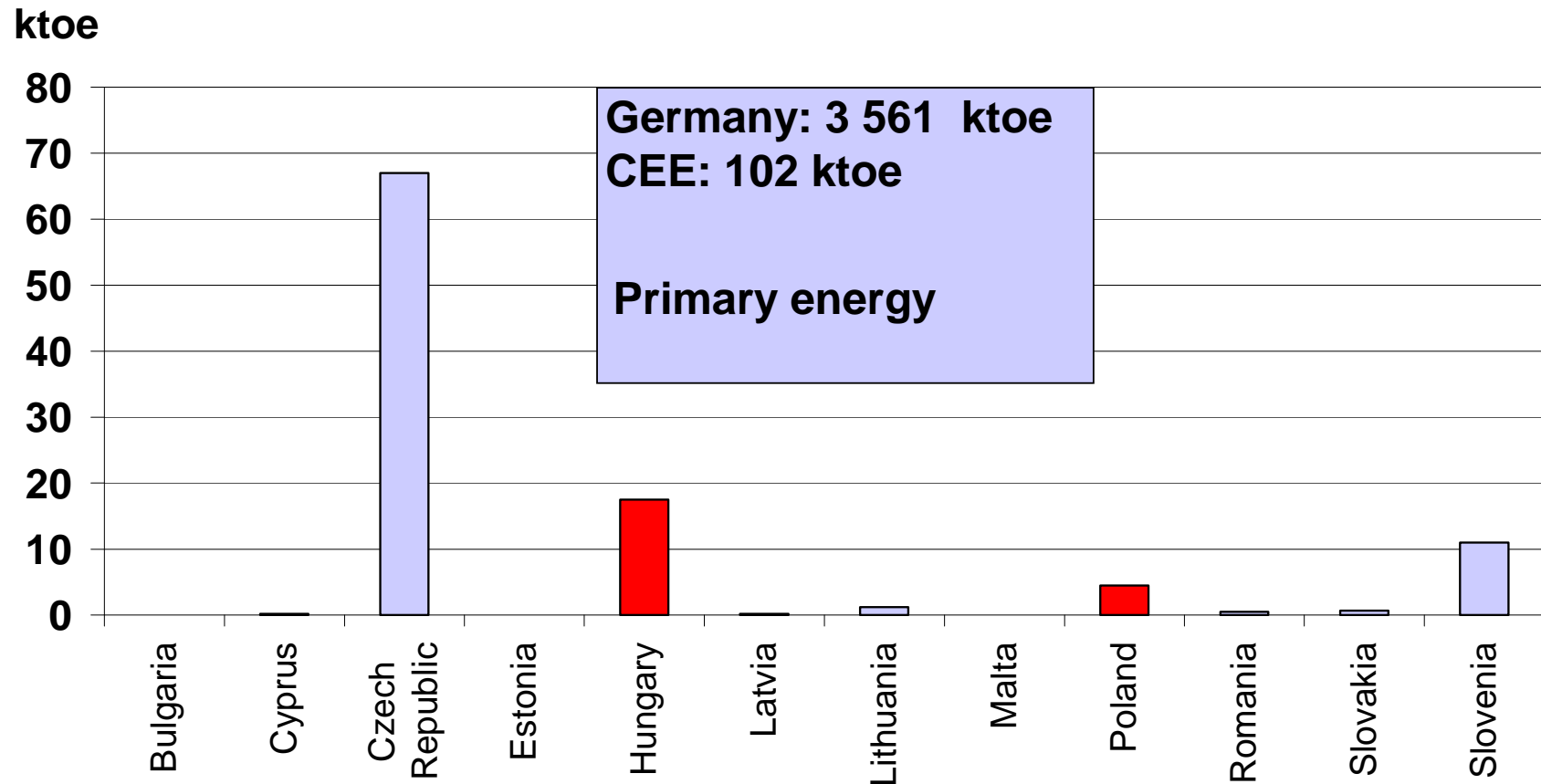
Opportunities for other RES vs. biomass domination in rural areas?

Inefficient use of resources: solid biomass is used in low quality furnaces (heat efficiency c. 40% vs. 80-85% of modern installations)

In some countries the use forest biomass has been already used and in addition restricted – Natura 2000, competition with other industries, incentives to use more expensive agro biomass

Too slow departure from inefficient use of biomass prohibits the development of modern infrastructure: micro grids, smart grids, local balancing groups, district heating.

Agricultural biogas primary energy in CEE (2009)



S: Solution to waste, environmental problems/ energy crops -local jobs and income

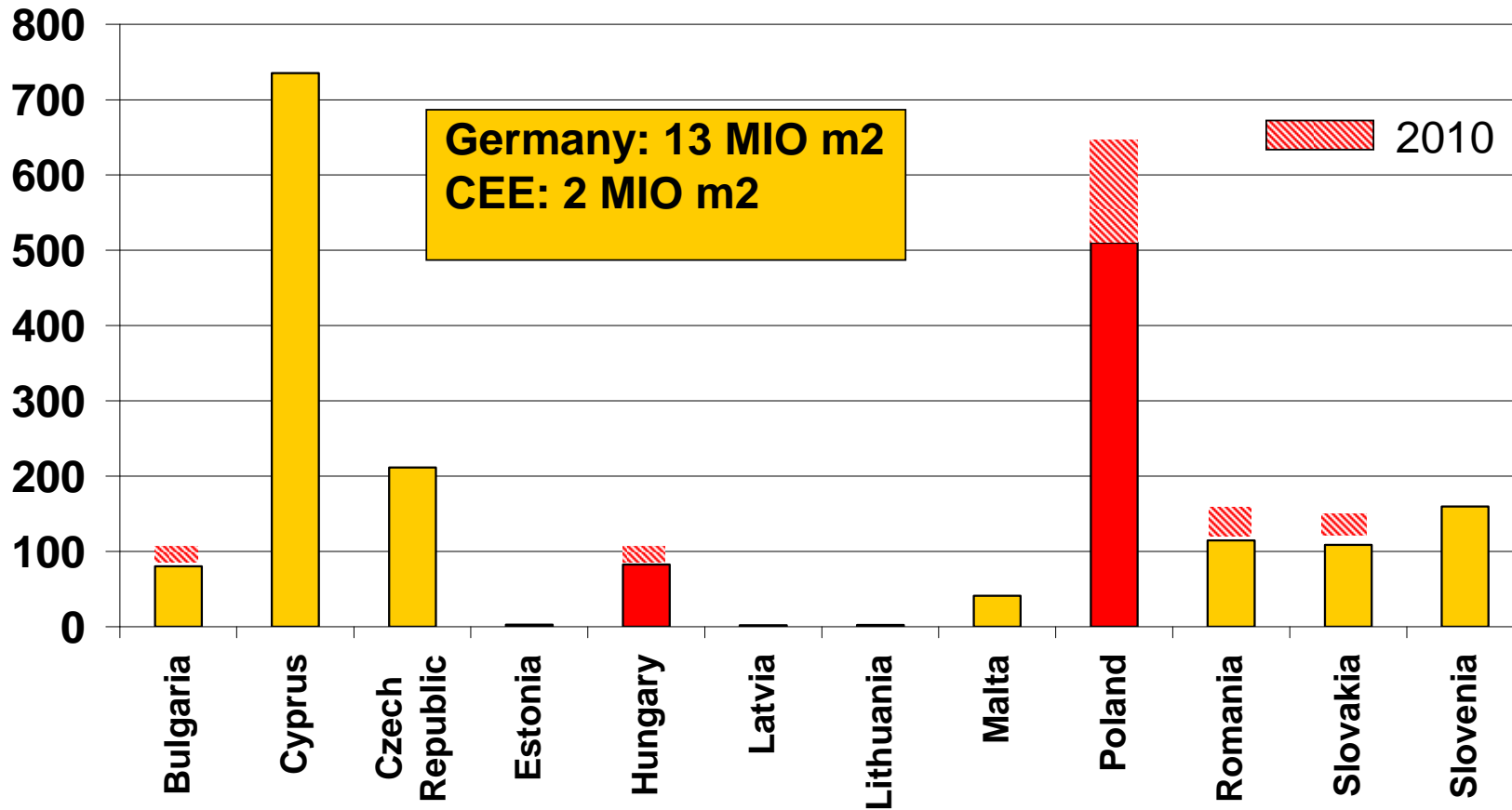
W: Costs, farm size in CEE too small to make the investment profitable/ too small on-farm heat demand

O: Special support schemes for biogas plants below 100 kW_e

T: Dependence on the external support schemes due to low profitability

Solar thermal in CEE (2009)

'000 m2



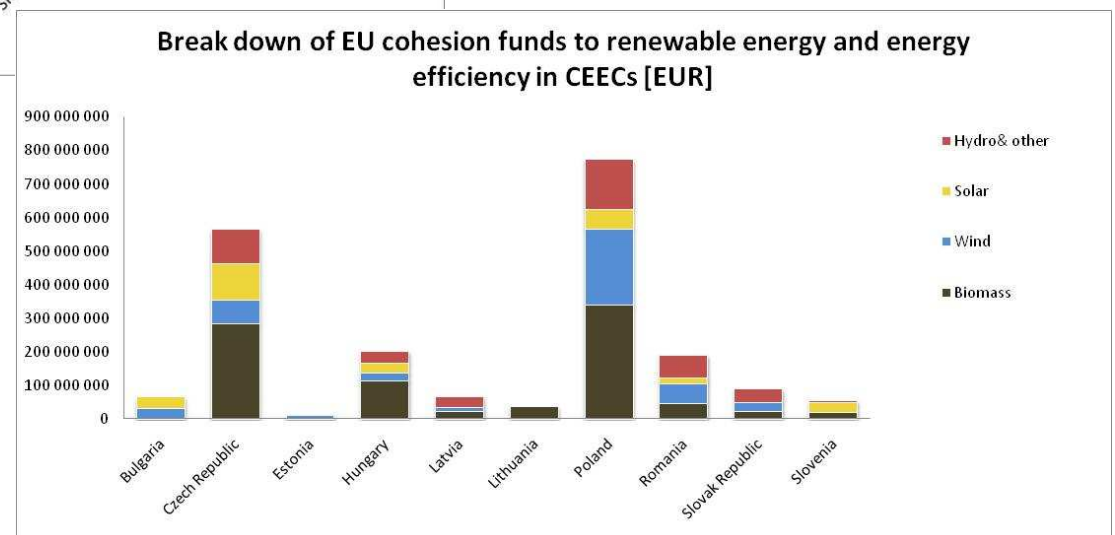
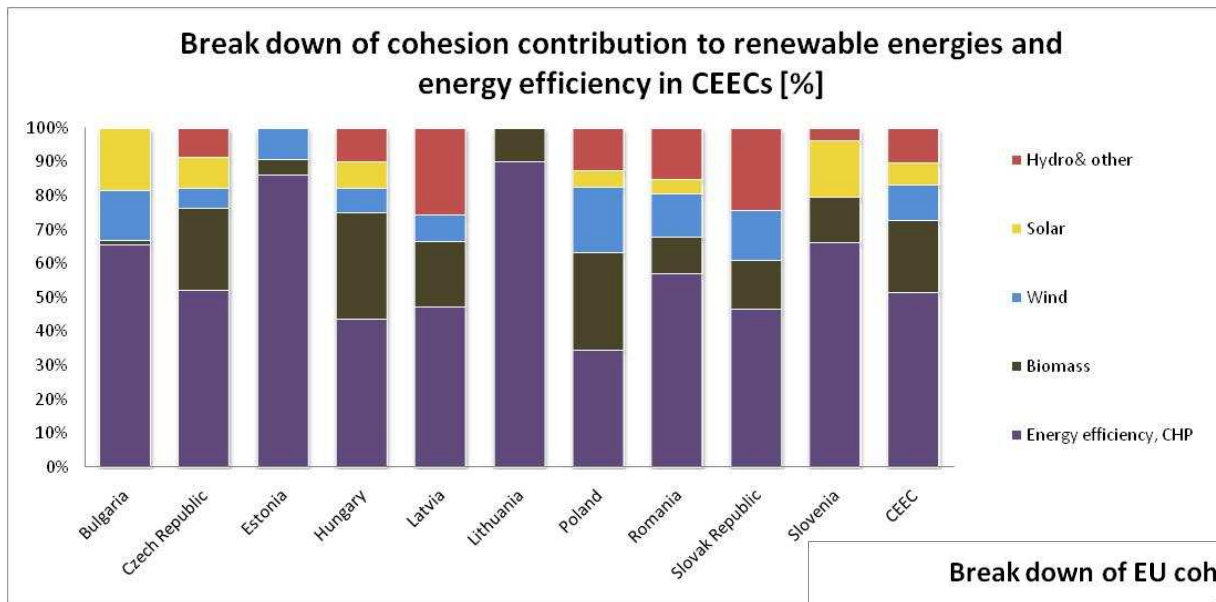
S: Reduction of heating costs

W: In colder climates along with additional energy source, costs

O: Dynamically developing technology

T: The dynamics depends on the external funding schemes

How Central European governments spent EU cohesion funds 2007-2013 for sustainable energy



EUR 2.2 bln for EE
 EUR 2.1 bln for RES
 Biomass: 0,9
 Solar: 02



Design of policies

lessons learnt and prospects

- Rural areas should be beneficiaries of the national RES policies, so far development shows that centralised RES energy production in CEEC has been preferred
- Reasons for preference of centralised systems over decentralised energy generation: support is easier to organise, control and benefit, it is cheaper in terms of direct income but the local benefits in the rural areas are missing
- New priorities for distribution of EU funds in the 2014-2020 period in order to redirect benefits to rural actors, bigger role of regions in distribution of funds



Thank you for your attention

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Biogas Seminar 2011

State of the art and perspectives to 2020

26th October 2011

Warsaw