

ENERGY POVERTY IN BULGARIA - ANALYSIS AND POLICY RECOMMENDATIONS

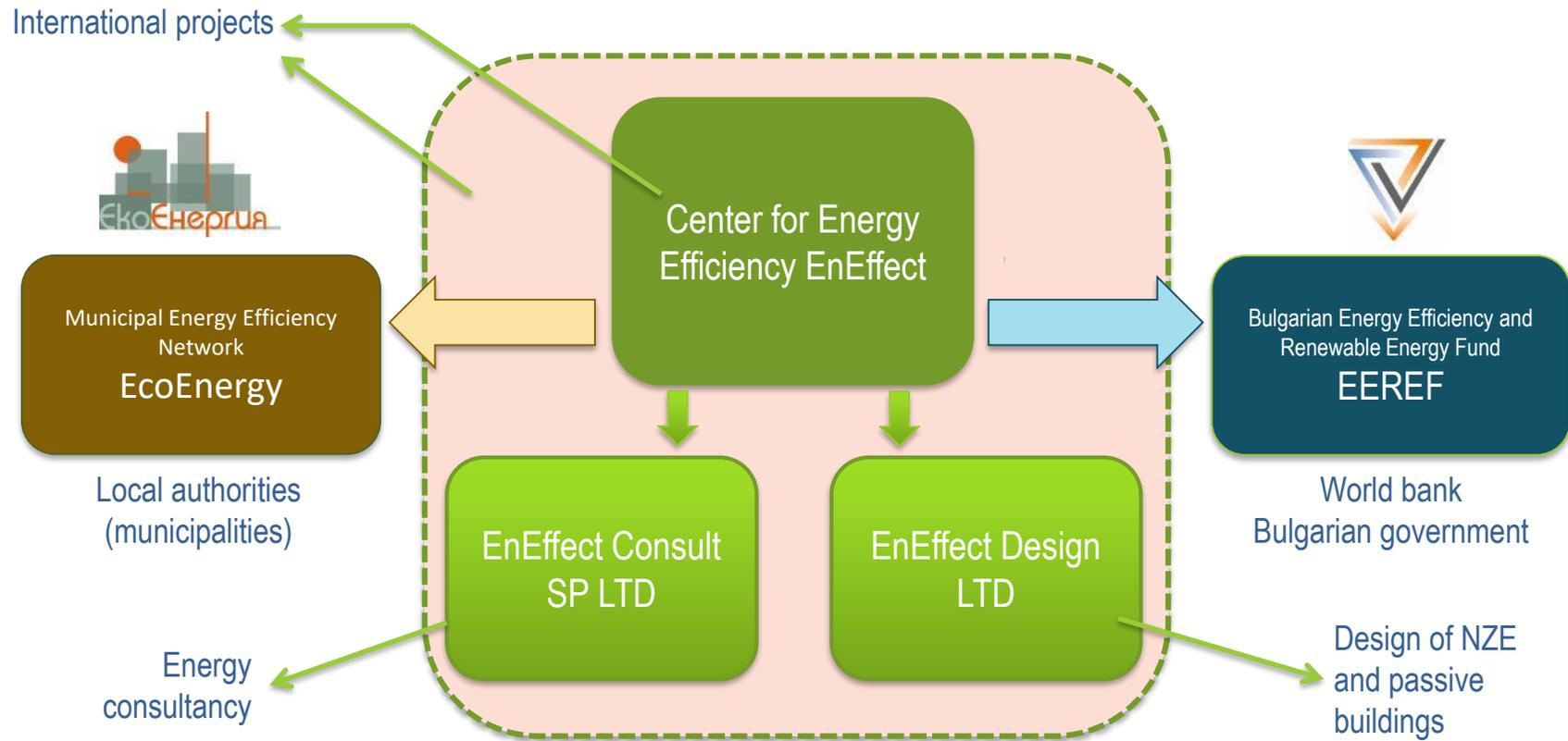


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EnEffect



Energy poverty in Europe

The European Energy Poverty Index

EDEPI scores show the majority of EU countries have 'moderately high' to 'extreme' levels of energy poverty among low-income households

	Country	EDEPI Score
1	Sweden	95.4
2	Finland	85.6
3	Denmark	81.9
4	Austria	81.2
5	Luxembourg	80.9
6	United Kingdom	80.5
7	Ireland	79.3
8	Netherlands	78.1
9	Germany	75.8
10	France	73.3
11	Belgium	67.6
12	Spain	64.7
13	Romania	64.2
14	Poland	61.0
15	Czech Republic	60.2
16	Croatia	58.8
17	Malta	58.6
18	Estonia	58.0
19	Italy	52.1
20	Slovenia	51.3
21	Cyprus	46.2
22	Greece	43.7
23	Lithuania	42.4
24	Latvia	40.0
25	Portugal	36.7
26	Slovakia	8.4
27	Hungary	6.2
28	Bulgaria	0.7

Level of energy poverty:



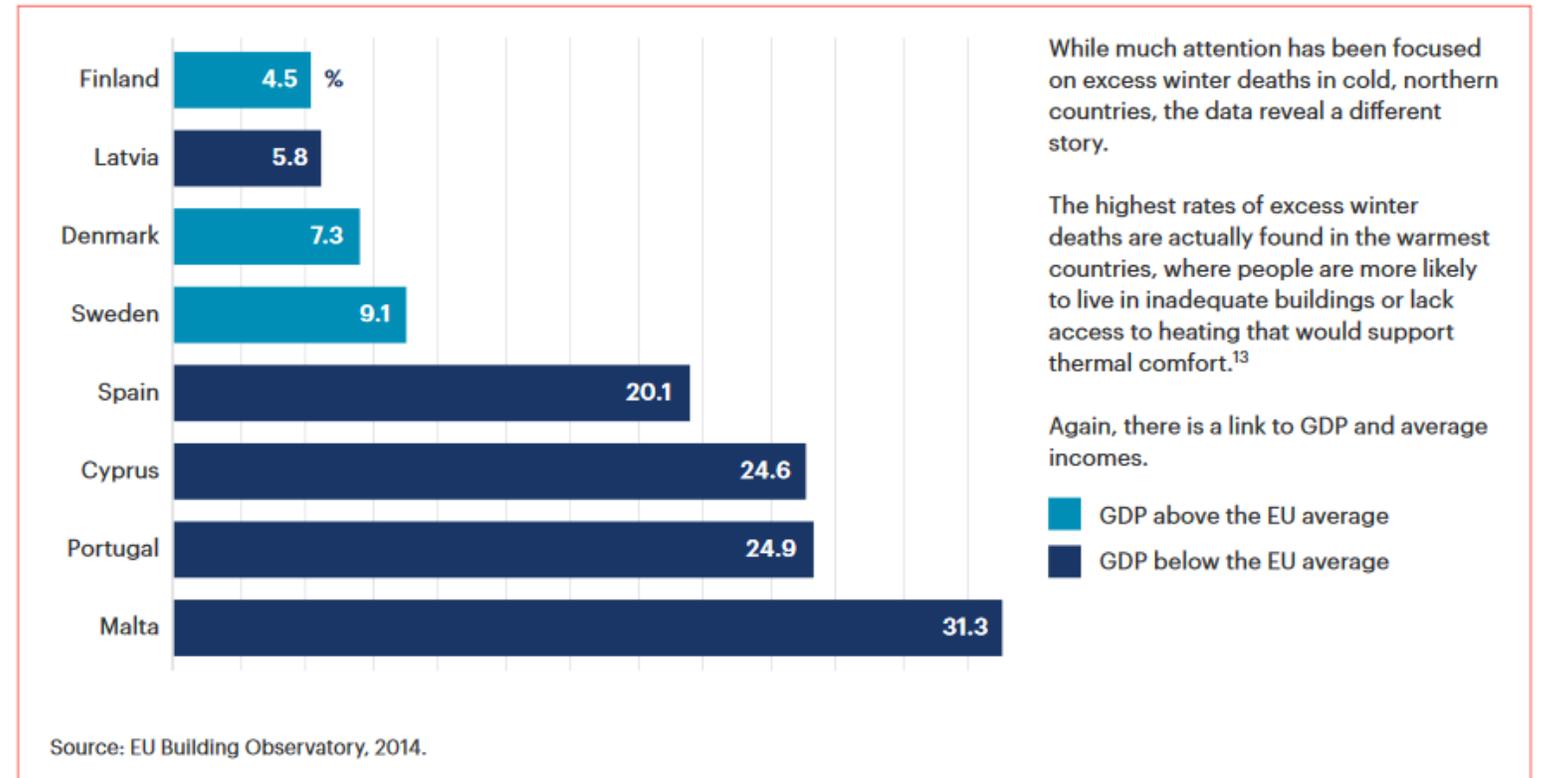
EDEPI scores show a divide reflecting GDP per capita levels in the EU.

Source: OpenExp, 2019.

Consequences of energy poverty

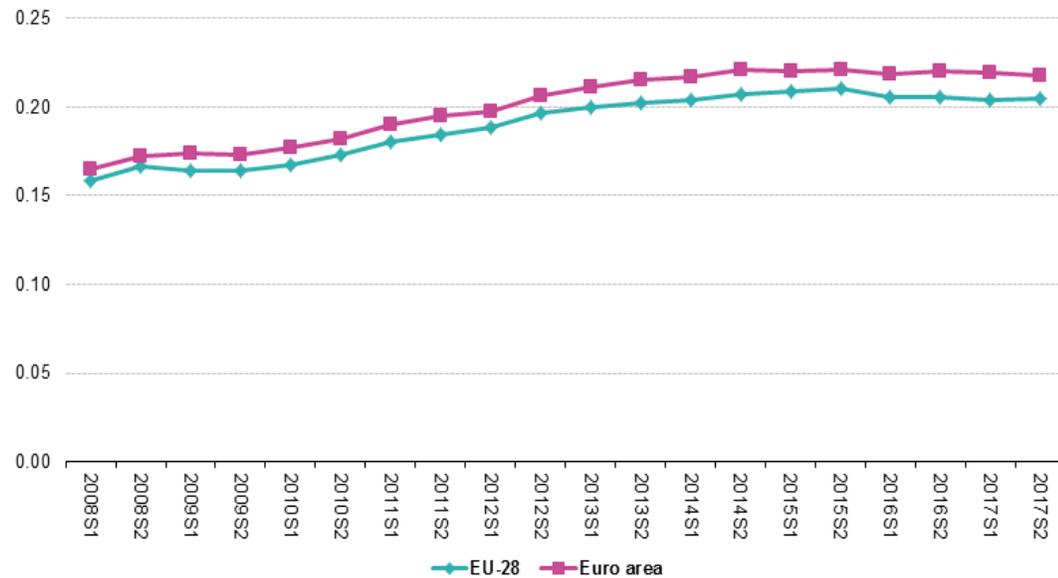
- ❖ poor health due to dampness, mold
- ❖ excess winter deaths and heat deaths
- ❖ air pollution
- ❖ vicious cycle of social exclusion

Fig. 6: Excess winter deaths concentrated in EU's warmest countries



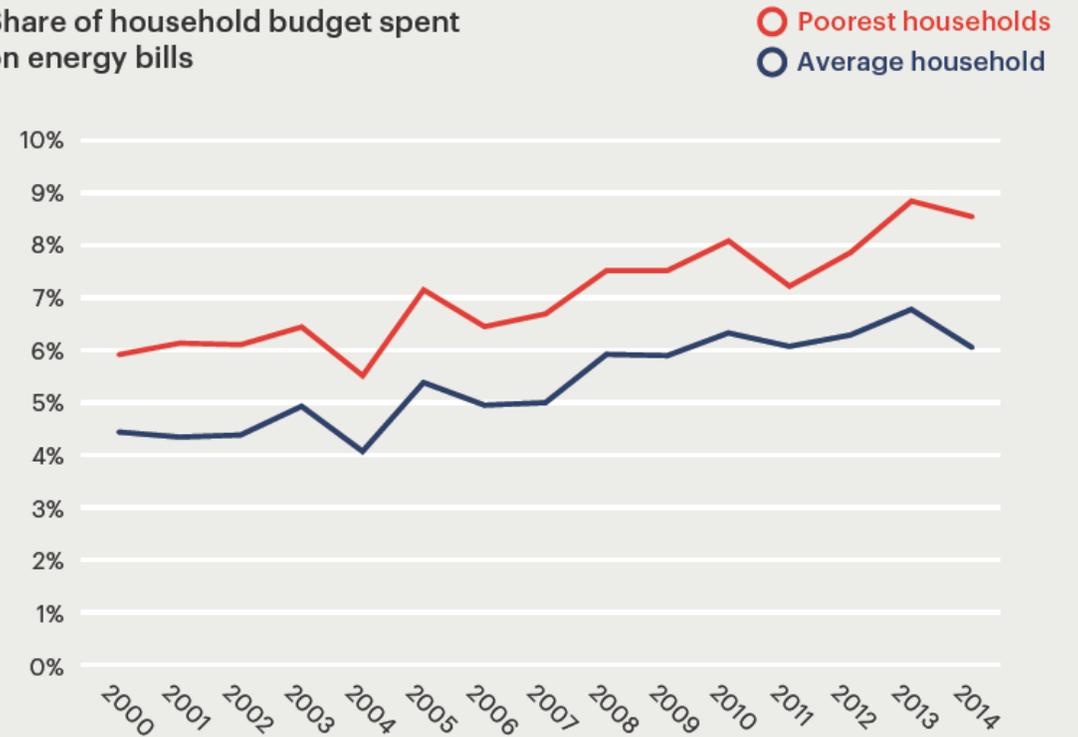
Causes: Energy prices and income

Development of electricity prices for household consumers, EU-28 and EA, 2008-2017
(EUR per kWh)



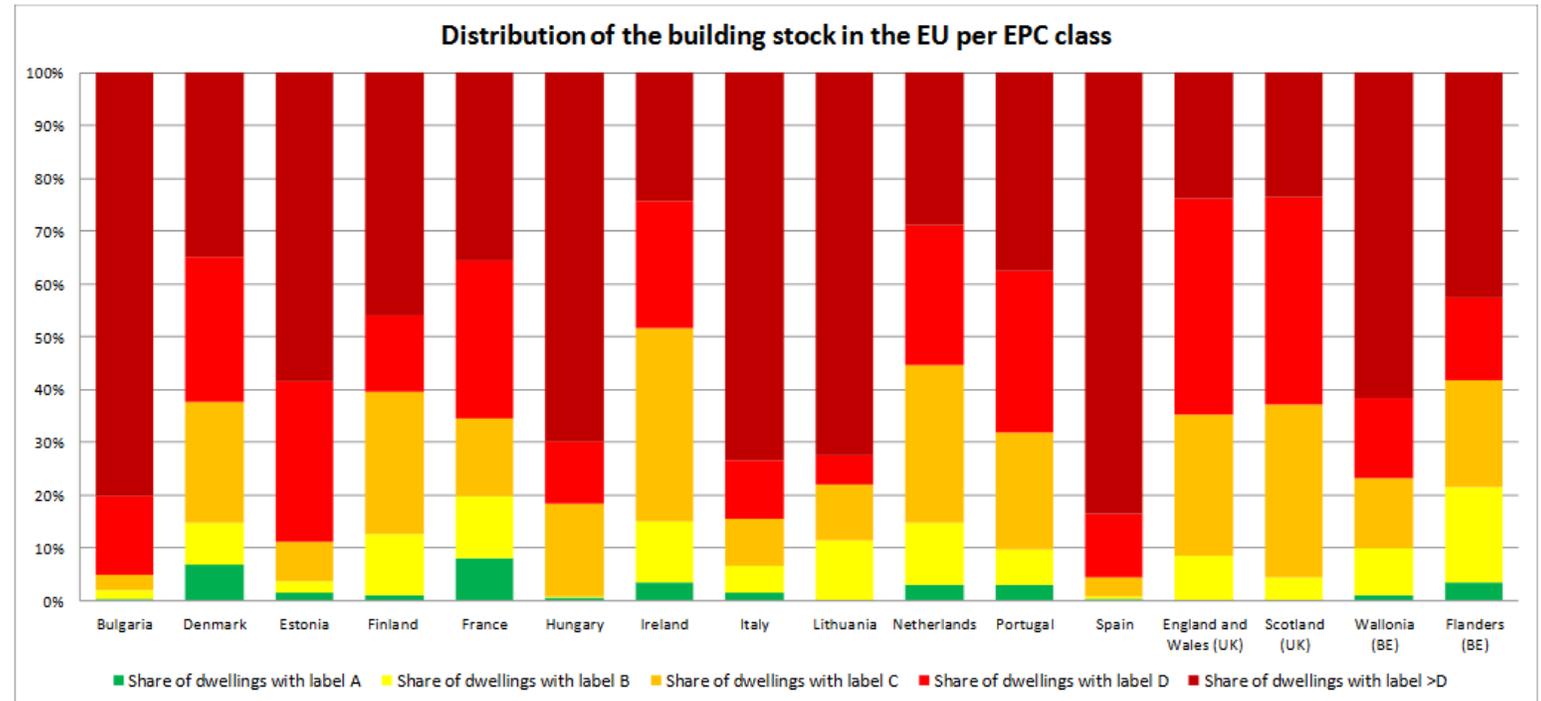
Source: Eurostat (online data codes: nrg_pc_204)

Share of household budget spent on energy bills



Causes: Inefficient buildings

- ❖ 97% of the building stock in Europe is not in the A category,
- ❖ Buildings represent 40% of the EU's energy use,
- ❖ The poorest live in the worst buildings.



Definitions:

Types and limitations (1)

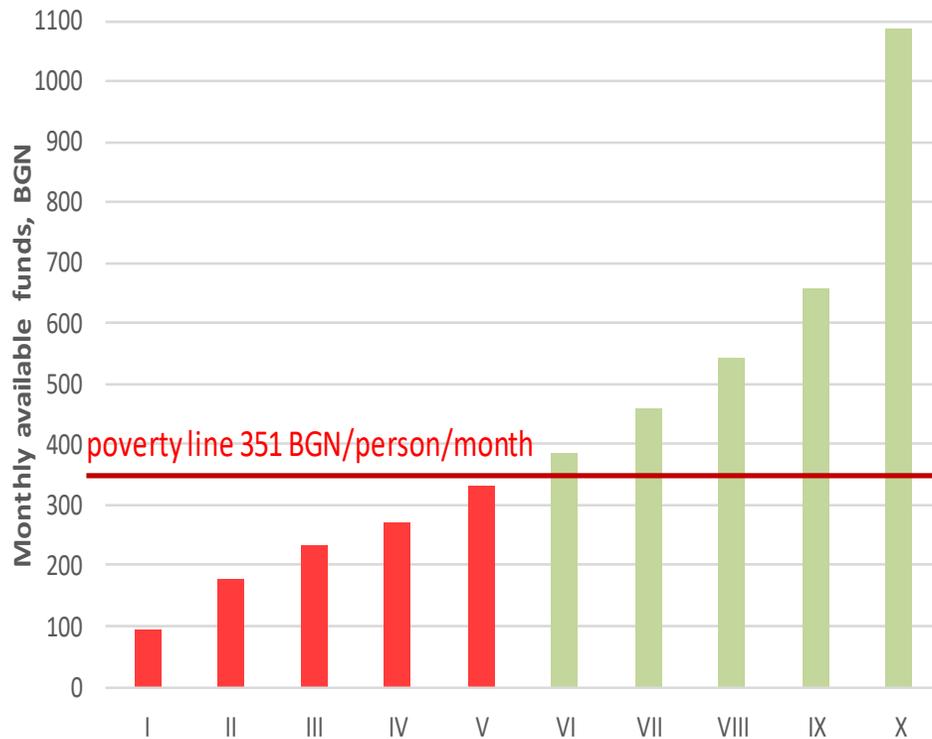
- Although energy poverty is partly driven by low household incomes and many low income households are energy poor, **energy poverty does not completely overlap with economic poverty**
- **Addressing the consequences** (for example, whether the household is able to heat in winter or whether the health of its members is poor)
- **Addressing the causes** (for example, measuring the energy efficiency of a building and equipment to see if a household will have to pay more than average energy costs to achieve adequate comfort)
- **A combination of both?**

Definitions:

Types and limitations (2)

- I. **Self-reported/subjective measures:** poverty condition measured based on households' personal assessment of their situation, such as whether their home is not adequately warm.
- II. **Objective measures:** poverty condition measured basing on indicators, according to two possibilities:
 - II-a. **Absolute measures:** they rely on factors which do not depend on other households, defining essential conditions for households to reach a minimum welfare level;
 - II-b. **Relative measures:** they compare the situation of a household with the “typical” one of other households

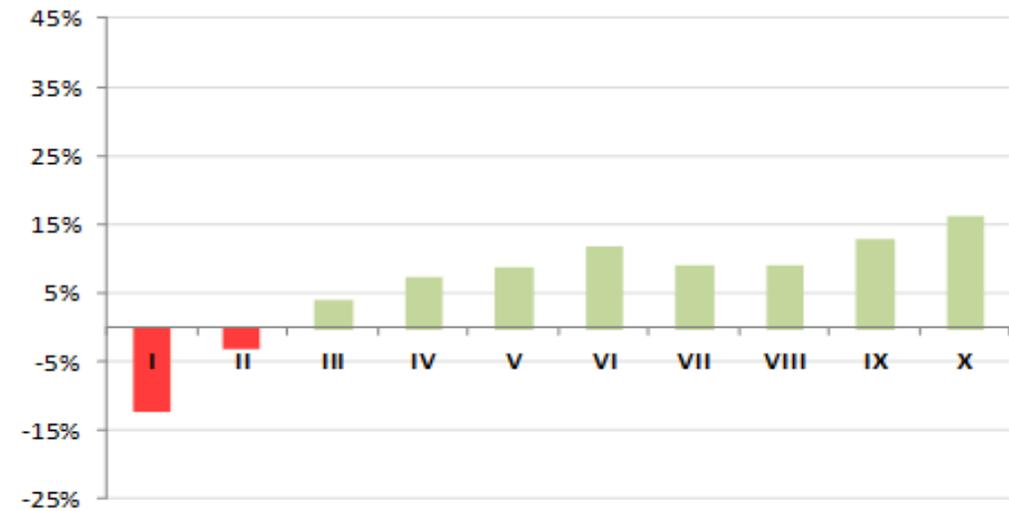
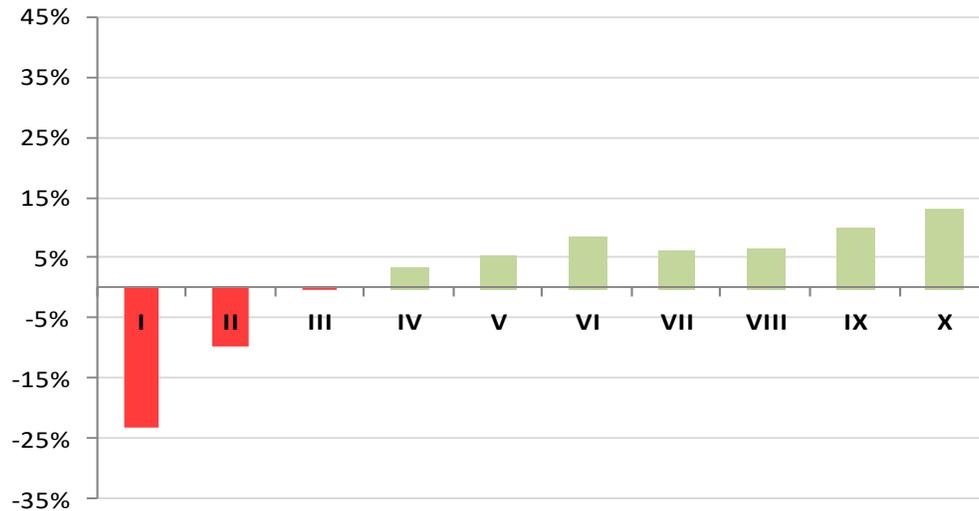
Bulgaria



Available funds per household member after paying for the costs of “adequate heating”, BGN/month

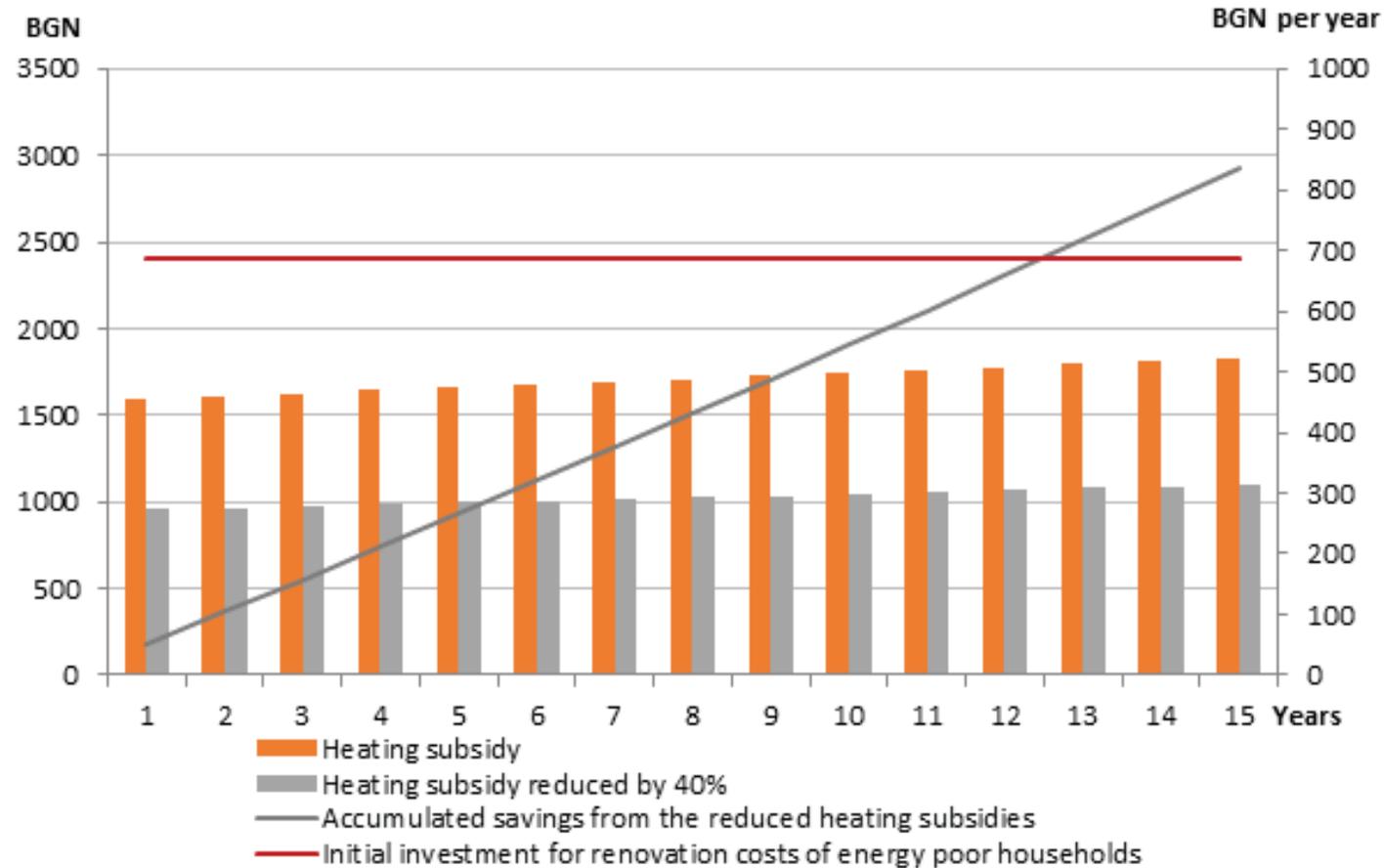
- Topping charts on energy poverty - but no definition available
- Huge potential for energy efficient renovation of the building stock
- Air quality issues increasingly attracting public attention
- Poorest households heavily dependent on fuel subsidies
- Deep energy retrofit has definite potential to lead significant part of the affected households out of poverty risk
- Needs to transform the existing finance schemes using excessive grant components

Bulgaria



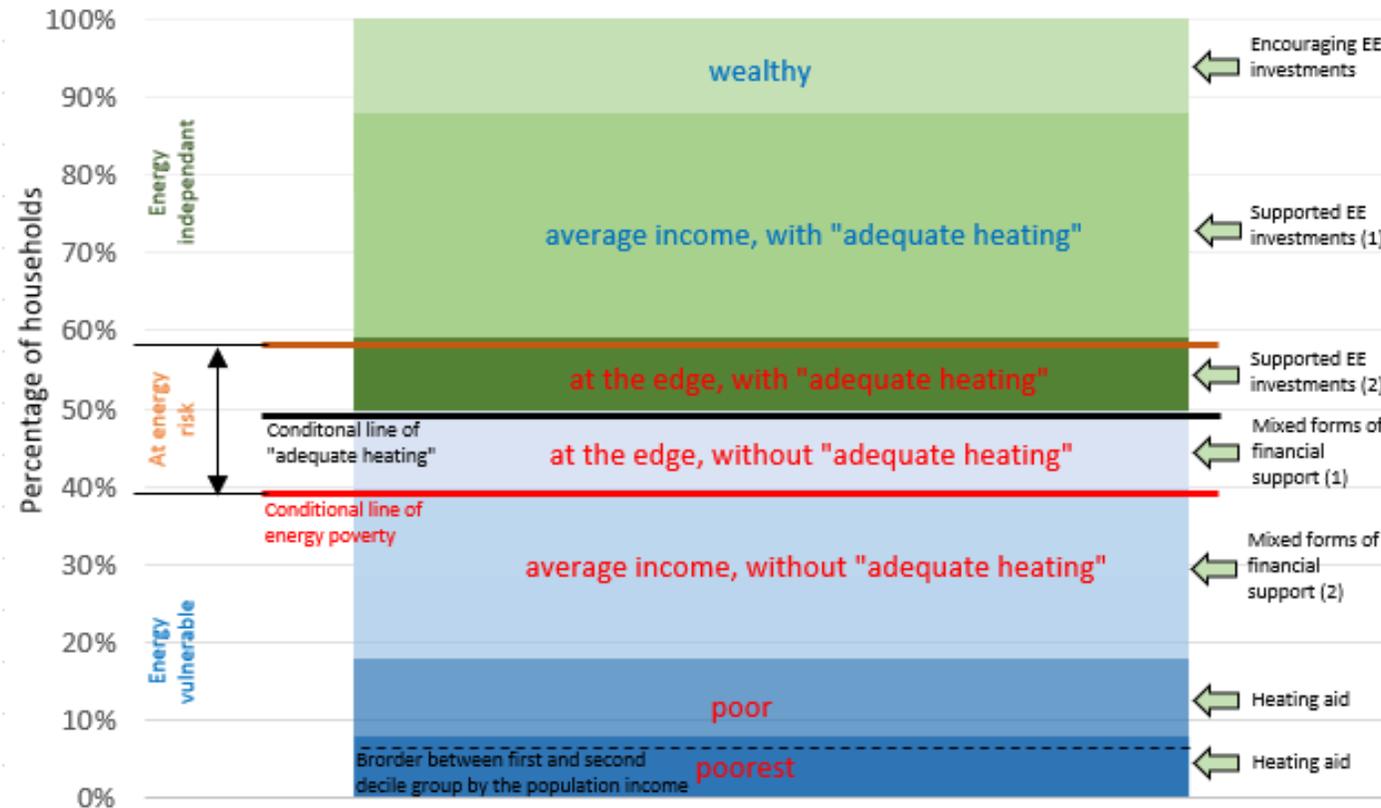
Difference between average monthly income and average monthly total expenditure if providing “adequate heating” of 65 m² residential area after renovation to energy class B and class A renovation

Bulgaria



Expected impact on public spending by redirecting 40% of target heating aid to finance the equity of energy poor households in renovation programs with 80% grant component and potential energy savings of 40%

Bulgaria



Possible renovation approaches for different energy poverty levels

Policy recommendations



- Long-term vision for deep energy renovation of the entire building stock with clear goals regarding social, economic and environmental impacts
- Sustainable financing scheme ensuring the continuation of investments in deep renovation
- Methodology for determining the degree of vulnerability of energy-poor citizens / households
- Review of the existing heating subsidy schemes for low-income population groups and integrate them into building renovation schemes

Policy recommendations



- Capacity building for local authorities to:
 - ✓ Develop plans and programs and projects for the renovation of buildings
 - ✓ Identify vulnerable households
 - ✓ Manage, supervise and control the implementation
 - ✓ Provide organizational and technical support to owners and owners' associations
 - ✓ Develop their own financing mechanisms
- Education and training for professionals in the construction sector
- Streamlined awareness raising campaign at national and local level

Next steps: EnergyMeasures



- Provide energy poor householders with low-cost energy measures and empower them to change their energy-related behaviours and practices through an approach that is cognisant of existing housing conditions and is reflective of the lived experience of householders.
- Work with municipalities, housing associations and other relevant actors to assess how current multi-level institutional contexts affect efforts to alleviate energy vulnerability in the participating countries.

Next steps: ComAct



- Develop useful definitions applicable in different conditions
- Develop financial mechanisms applying innovative schemes to provide access and involve energy poor households
- Provide a list of technical measures based on extensive energy auditing practice, targeting to decrease the cost of typically capital-intensive measures
- Involve local communities in renovation policies and actions

Next steps: Congregate



- MEASURE!
- Conduct technical survey to measure the energy consumption and internal comfort parameters in different types of buildings and different households
- Conduct sociological research to analyse the impact of the renovation measures and the attitudes of the households
- Investigate the opportunities to

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Thank you for your attention!



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