

Αθήνα, 3/12/2025

Energy Poverty in Greece: Measurement, Impacts, and Policy Responses

Sevastianos Mirasgedis

Research Director, National Observatory of Athens

seba@noa.gr



JustReDI: a short presentation

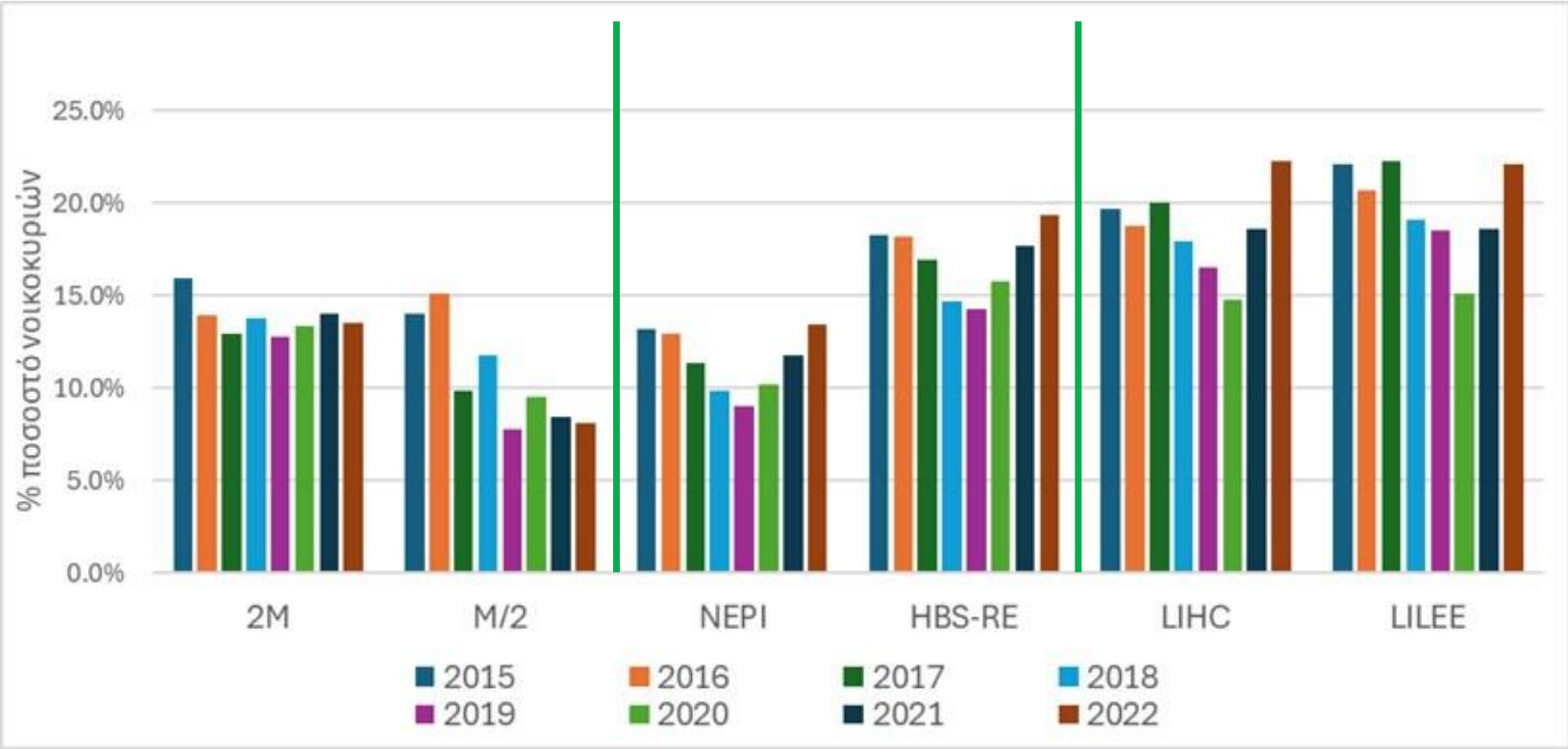
- Flagship action funded by the Greek General Secretary for Research and Innovation.
- The project analyses :
 - The (2) transitions [**green and digital**]
 - in (3) levels [**economy/business, individuals/households, policy planning/governance**]
 - in (2) dimensions of social impact [**positive – negative**].
- Analysis at **national** and **regional (NUTS2)** level.
- Comprise 21 **Work Packages (WP)** and 80 **Deliverables**, structured in 2 Pillars and 2 Horizontal Axis:
 - Pillar #1:** Social impacts of the green transition (7 WP)
 - Pillar #2:** Social dimensions of digital transformation (5 WP)
 - Horizontal Axis #1:** Synergies of green transition and digital transformation (7 WP)
 - Horizontal Axis #2:** Data management, digital portal, dissemination of research results, networking with institutions (2 WP)

Energy Poverty

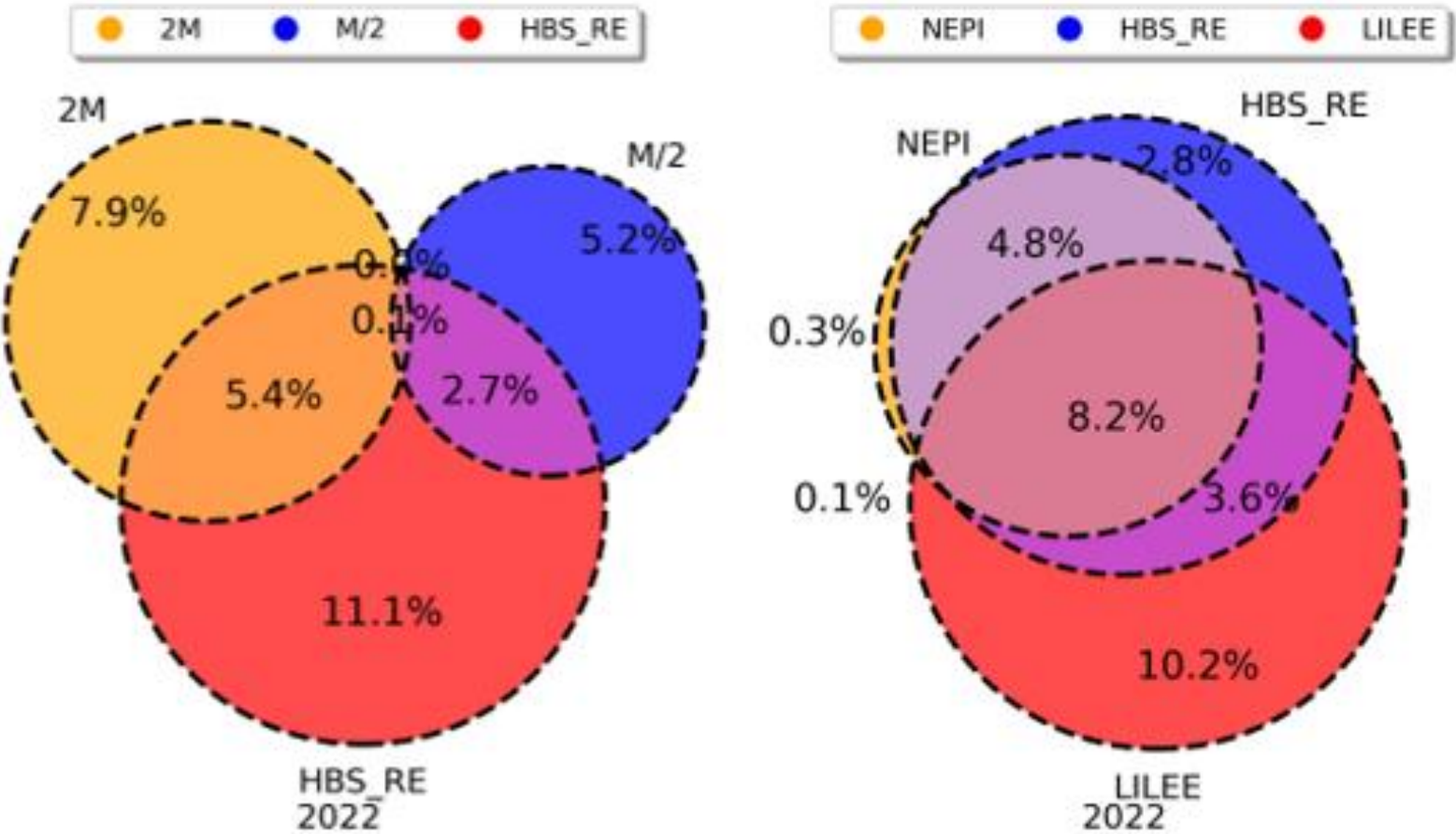
- **Energy poverty metrics** at national and regional level – **main determinants**.
- Evaluate the **effectiveness of various measures** aiming at tackling energy poverty.
- The role of **decentralized energy production** technologies in addressing energy poverty.
- Energy poverty, and **social impacts**, including **impacts on public health**.



Energy Poverty level in Greece using objective indicators



Overlaps of Energy Poverty Indicators



Policies for tackling energy poverty

- **Energy subsidies** targeting the most vulnerable households.
- **Structural measures** for tackling energy poverty in the long run (energy renovations, heat pumps, etc.).
- **Information and education** activities.



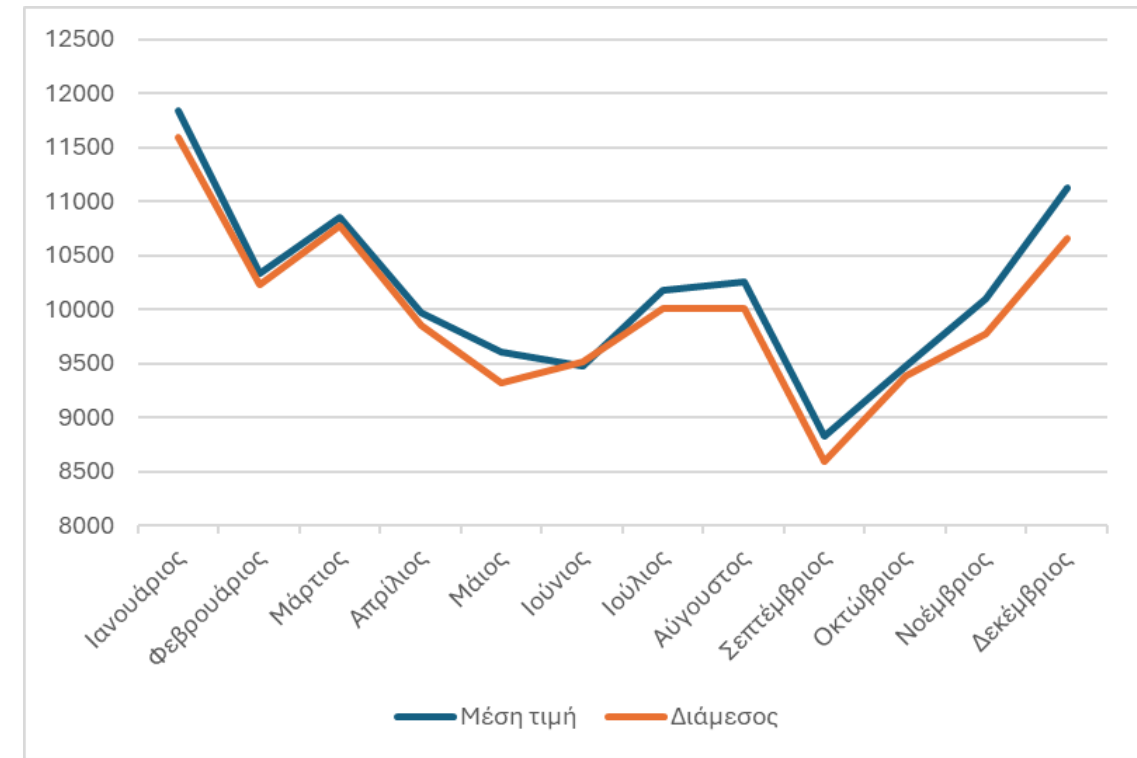
Evaluation of the policies aiming to tackle energy poverty

- Deep energy renovations, combined with heating system upgrades, are the most effective policies for reducing energy poverty levels
- Shallow renovations, when combined with heating system upgrades, also help alleviate the problem.
- Upgrading heating systems without improving the building envelope lifts only a small portion of affected households out of energy poverty.
- The subsidy schemes examined do not significantly reduce energy poverty levels, but they do help to mitigate the severity of energy poverty and improve the quality of energy services received by households.

Μέτρα πολιτικής	NEPI	HBS-RE	LIHC	LILEE
M1- Deep energy renovations	-55.5%	-70.2%	-98.0%	-100.0%
M2- Shallow energy renovations	-24.3%	-29.7%	-59.1%	-87.6%
M3- Use of modern heating systems	-11.5%	-15.2%	-34.5%	-17.6%
M4- Combined application of measures M1 and M3	-61.5%	-77.3%	-99.6%	-100.0%
M5- Combined application of measures M2 and M3	-33.7%	-43.7%	-82.0%	-92.5%
M6- Provision of 50 EUR additional subsidy to energy poor households	-1.5%	-1.5%	-0.1%	-0.3%
M7- Provision of 100 EUR additional subsidy to energy poor households	-3.0%	-3.2%	-0.1%	-0.4%
M8- Provision of 150 EUR additional subsidy to energy poor households	-4.5%	-4.8%	-0.1%	-0.6%

Energy Poverty and Health

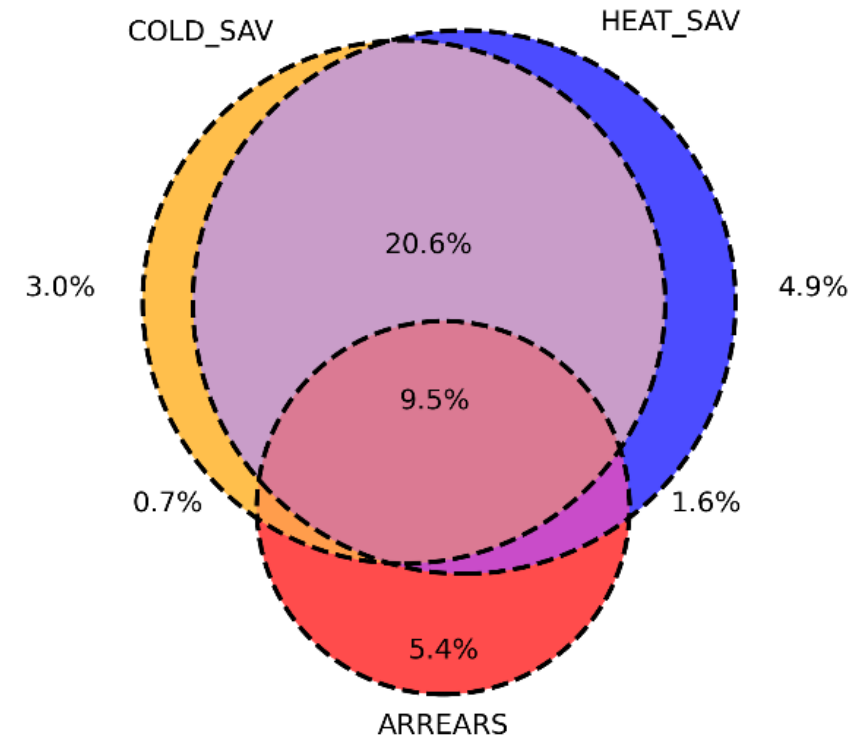
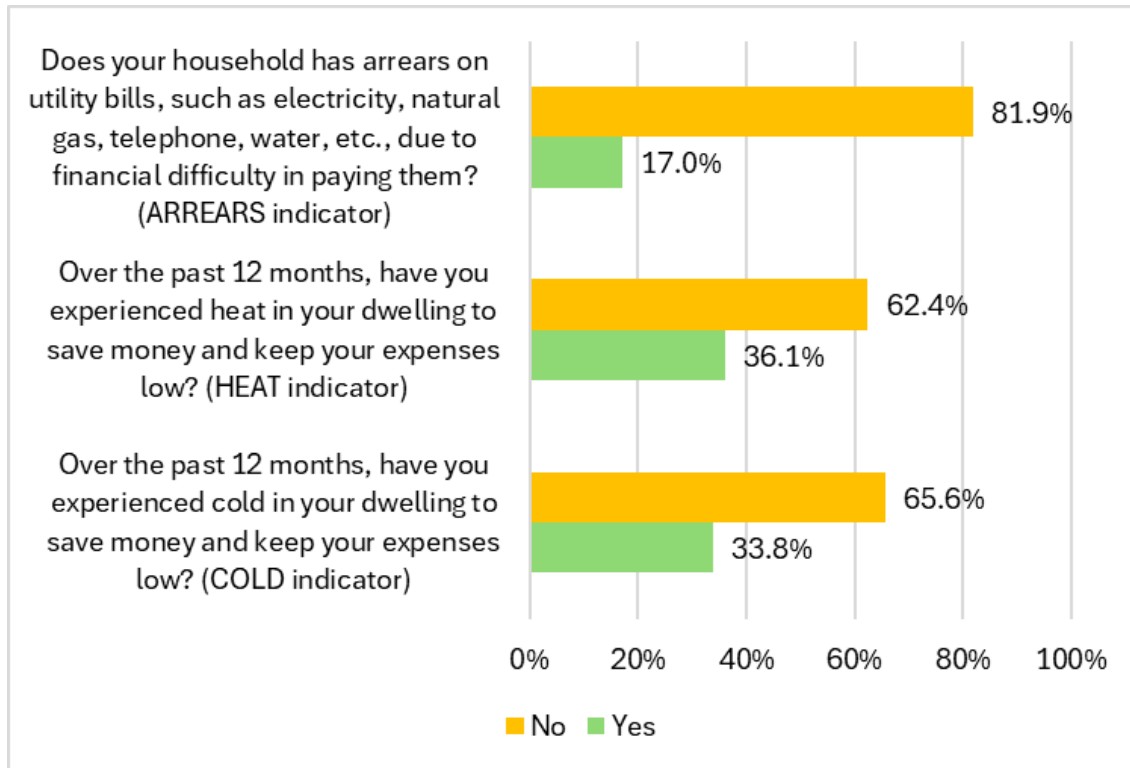
- Energy poverty is associated with significant health problems.
- In Greece ~1500 deaths/year are attributed to energy poverty
- Households with inadequate heating have a 42-82% increased chance of experiencing moderate or poor health.
- Implementing effective policies to address energy poverty can significantly reduce impacts.



Average and median of the number of monthly deaths in Greece for the period 2010-2022

Results of the Social Survey in the context of JustReDI

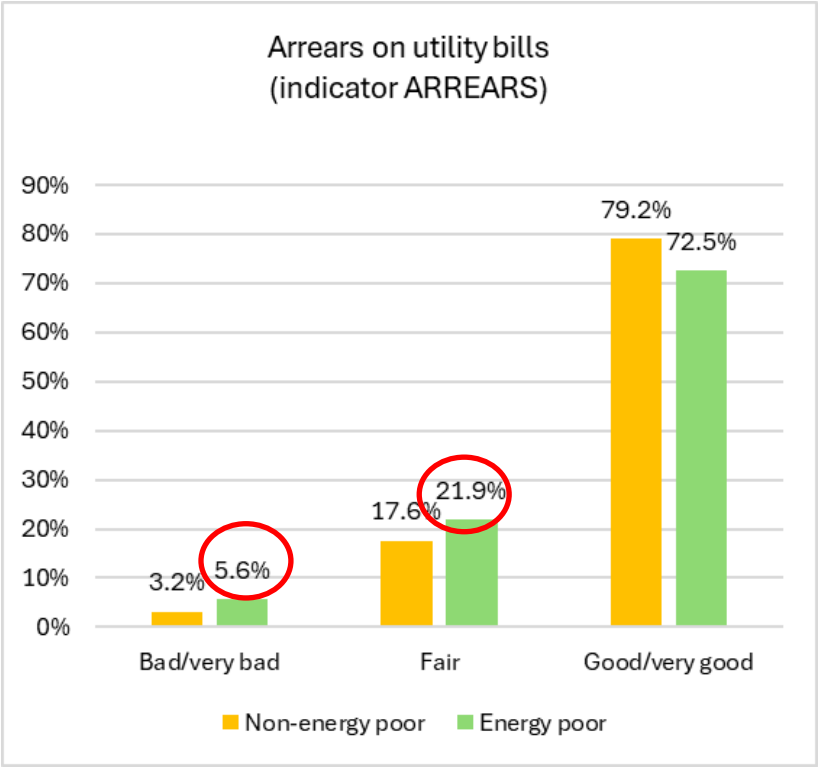
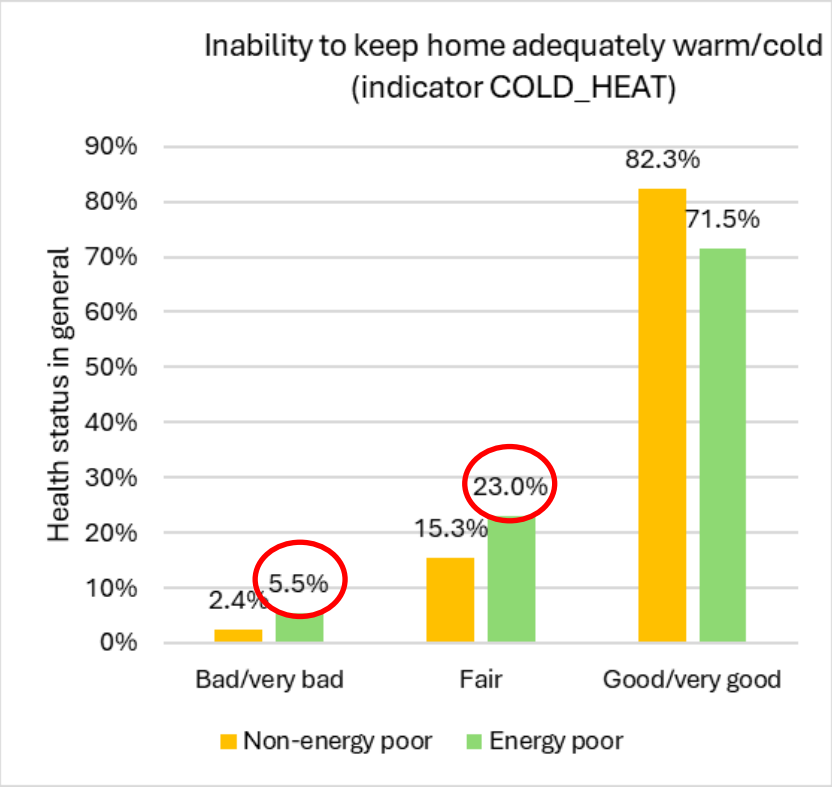
Energy poverty indicators and overlaps



Source: L. Avrami, D. Kapetanakis, S. Mirasgedis, F. Vatavali, O. Kaminiaris, E. Georgopoulou, Y. Sarafidis, N. Demertzis (2025). Energy poverty and social impacts in Greek households. JustReDI: First Book Results (in Greek)

Results of the Social Survey in the context of JustReDI

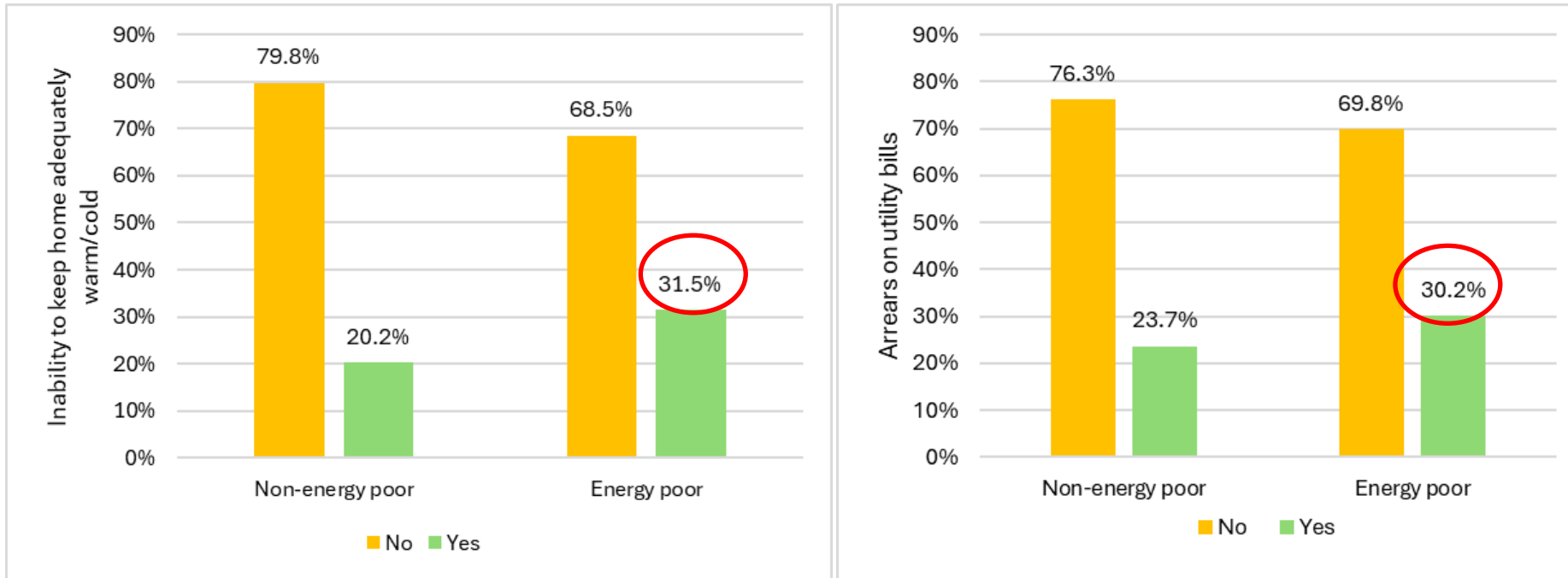
Energy poverty and general health status of households



Source: L. Avrami, D. Kapetanakis, S. Mirasgedis, F. Vatavali, O. Kaminiaris, E. Georgopoulou, Y. Sarafidis, N. Demertzis (2025). Energy poverty and social impacts in Greek households. JustReDI: First Book Results (in Greek)

Results of the Social Survey in the context of JustReDI

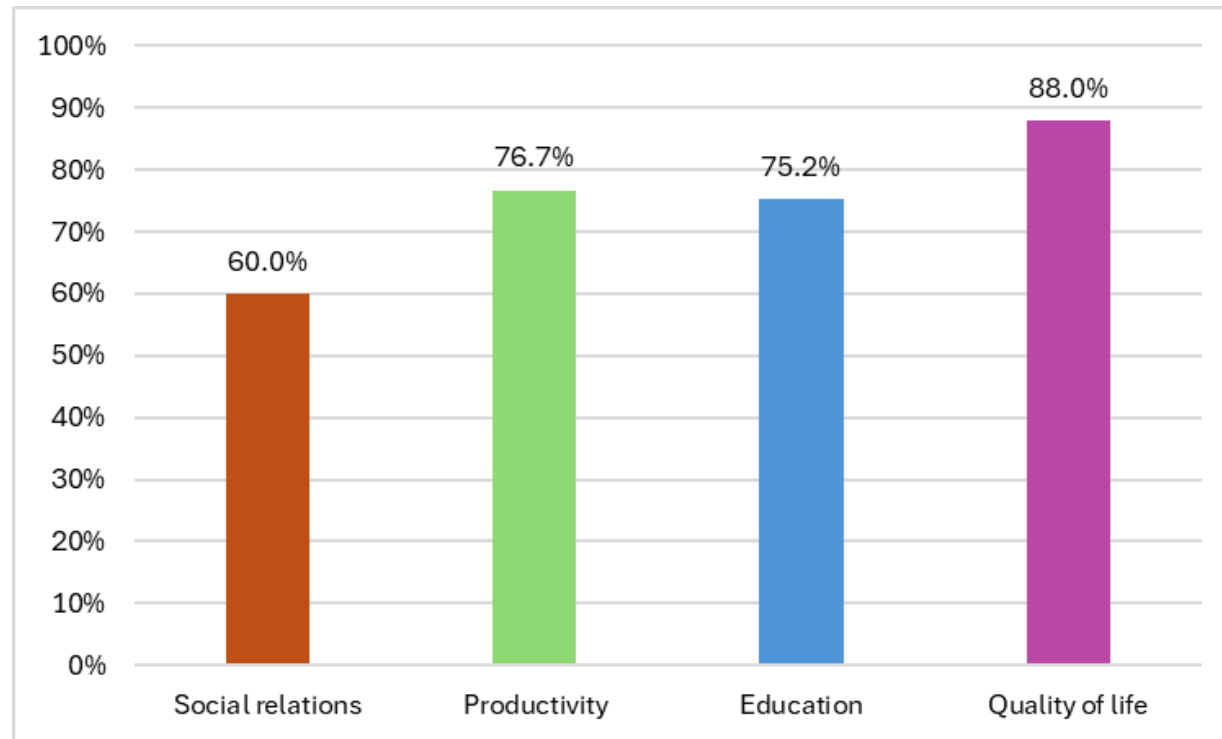
Energy poverty and long-standing health problems



Source: L. Avrami, D. Kapetanakis, S. Mirasgedis, F. Vatavali, O. Kaminariaris, E. Georgopoulou, Y. Sarafidis, N. Demertzis (2025). *Energy poverty and social impacts in Greek households. JustReDI: First Book Results (in Greek)*

Results of the Social Survey in the context of JustReDI

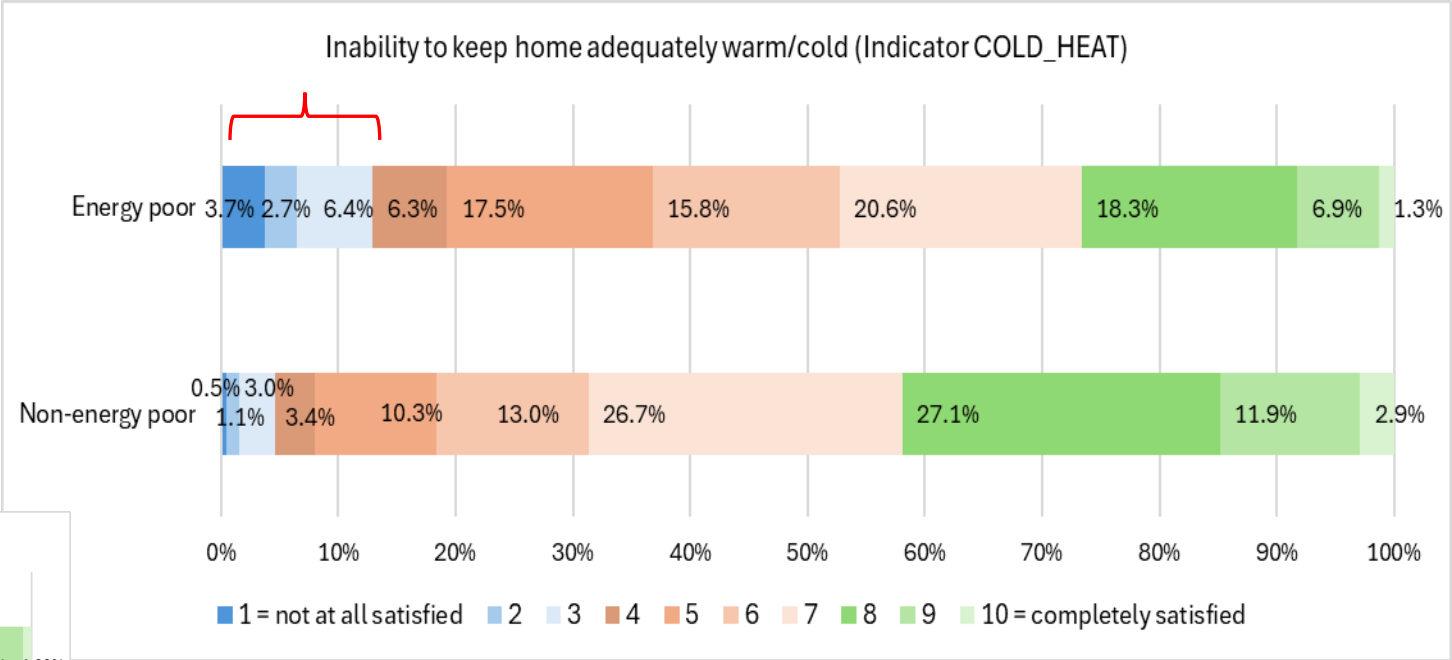
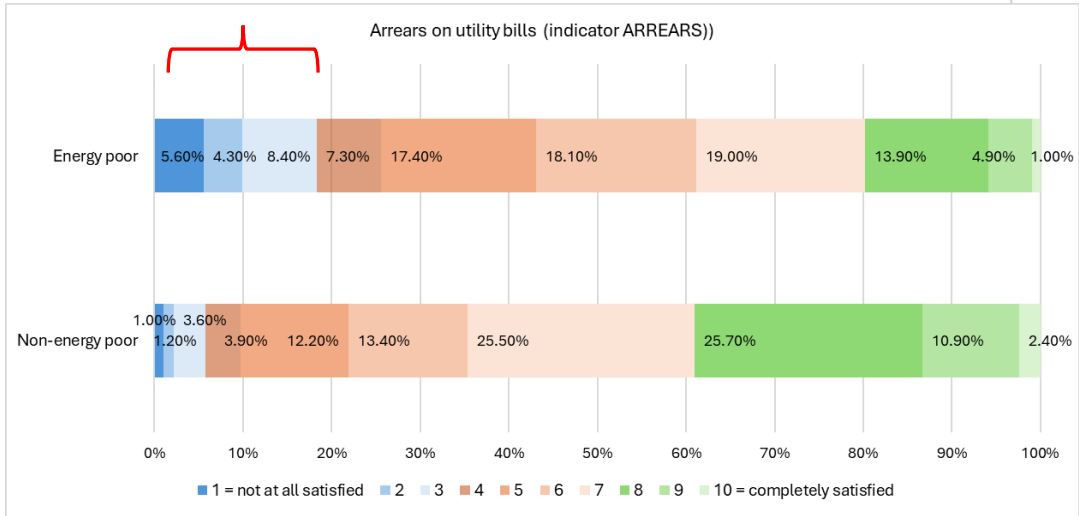
Social impacts of energy poverty: Percentage of households with inadequate heating or cooling that experience social constraints



Source: L. Avrami, D. Kapetanakis, S. Mirasgedis, F. Vatavali, O. Kaminariaris, E. Georgopoulou, Y. Sarafidis, N. Demertzis (2025). *Energy poverty and social impacts in Greek households. JustReDI: First Book Results (in Greek)*

Results of the Social Survey in the context of JustReDI

Life satisfaction index and energy poverty



Source: L. Avrami, D. Kapetanakis, S. Mirasgedis, F. Vatavali, O. Kaminiaris, E. Georgopoulou, Y. Sarafidis, N. Demertzis (2025). Energy poverty and social impacts in Greek households. JustReDI: First Book Results (in Greek)

Thank you....