



European
Commission

20-22 JUNE 2023

EUROPEAN SUSTAINABLE ENERGY WEEK

Accelerating the clean energy
transition – towards lower bills
and greater skills



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ENPOR project: Tools to identify and address energy poverty in the private rented sector across Europe



Dimitris Papantonis



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THE ENPOR PROJECT

- H2020 project, representing key stakeholders across the private rented sector (PRS)
- Deepen understanding on energy poverty in the PRS
- Monitor dimensions of energy poverty in the PRS
- Support the set-up and implementation of energy efficiency policies in 7 countries



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Analyse energy poverty literature, policies and barriers in the PRS across the EU



Monitor and map the dimensions of energy poverty in the PRS with the Energy Poverty Dashboard



Support the adaption and implementation of 10 policies in 7 countries tailored to the PRS' needs via REACT Groups



THE ENERGY POVERTY DASHBOARD (1/3)

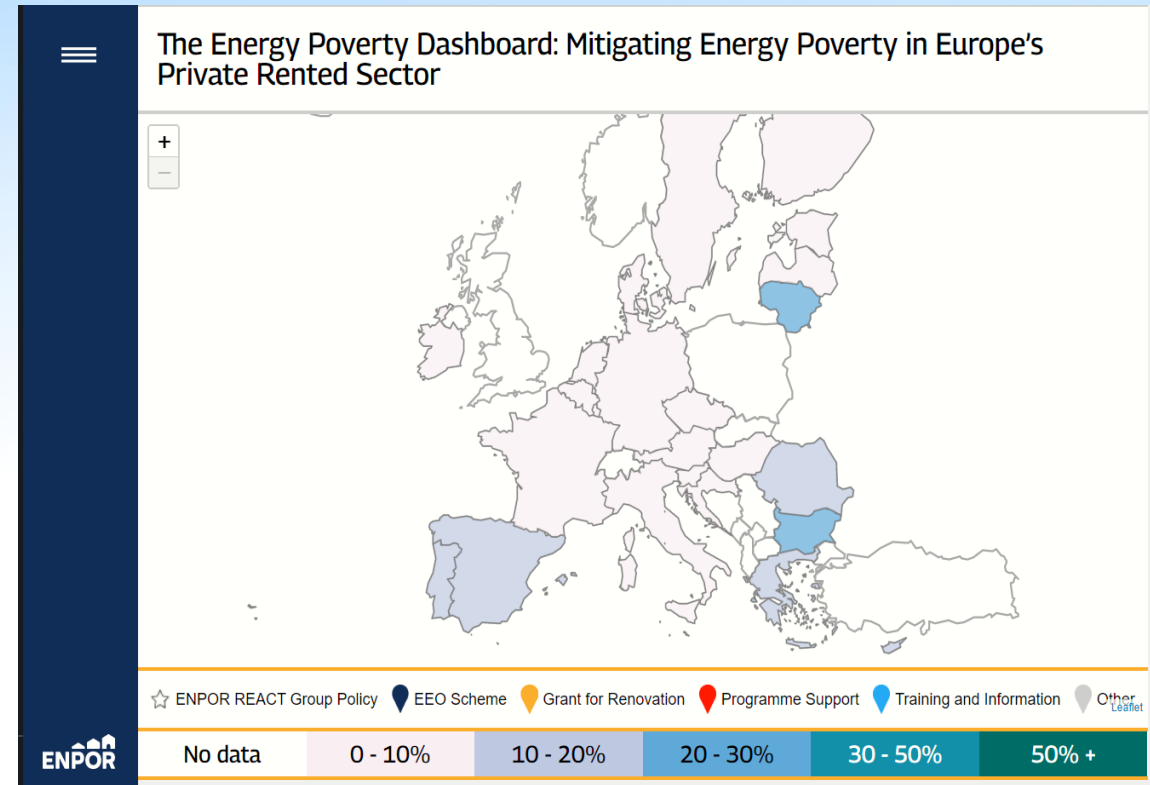
Purpose

Lack of Europe-wide data on the PRS

Need for spatial and temporal disaggregation

Mapping initiatives and interventions

A platform for sharing knowledge and practice



visit energypoverty.info to explore the data and policies



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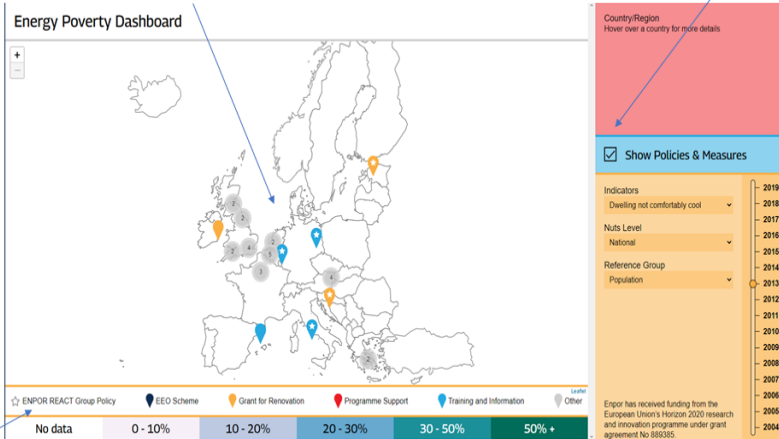




THE ENERGY POVERTY DASHBOARD (2/3)

Map – Policies and measures appear on the map either as individual pins or as number clusters where multiple policies exist in the same location. Each pin is geolocated to the policy/measure's implementing authority HQ. Clicking on a number cluster reveals the policies in that cluster

Show Policies and Measures – Check this box to view all policies and measures collected on the map. Uncheck to hide.



Key – Indicates the category of the policy or measures; a star icon indicates that the policy is an ENPOR REACT Group policy

Pan-European platform for the **spatial visualisation** and **quantification** of **energy poverty** patterns and **energy efficiency policies** in the PRS.

Indicators to investigate **structural factors** that **underpin inequalities** in the PRS.

visit energypoverty.info to explore the data and policies



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THE ENERGY POVERTY DASHBOARD (3/3)

Energy Poverty Dashboard

+
-

Country/Region
Hover over a country for more details

Show Policies

Indicators
Ability to keep home warm

Nuts Level
National

Reference Group
Population

ENPOR REACT Group Policy EEO Scheme Grant for Renovation Programme Support Training and Information Leaflet Other

No data 0 - 10 10 - 20 20 - 30 30 - 50 50+

Enpor has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 889385.



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THE SPLIT INCENTIVES QUANTIFICATION TOOL

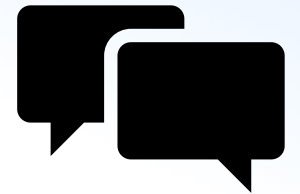
(1/4)



Identify the **share of the triggered benefits** from the implementation of energy efficiency interventions between **landlords and tenants**.



Quantify the **appropriate allocation of costs or subsidy rates for both sides**, towards specific renovations scenarios in **several geographical/national contexts**.



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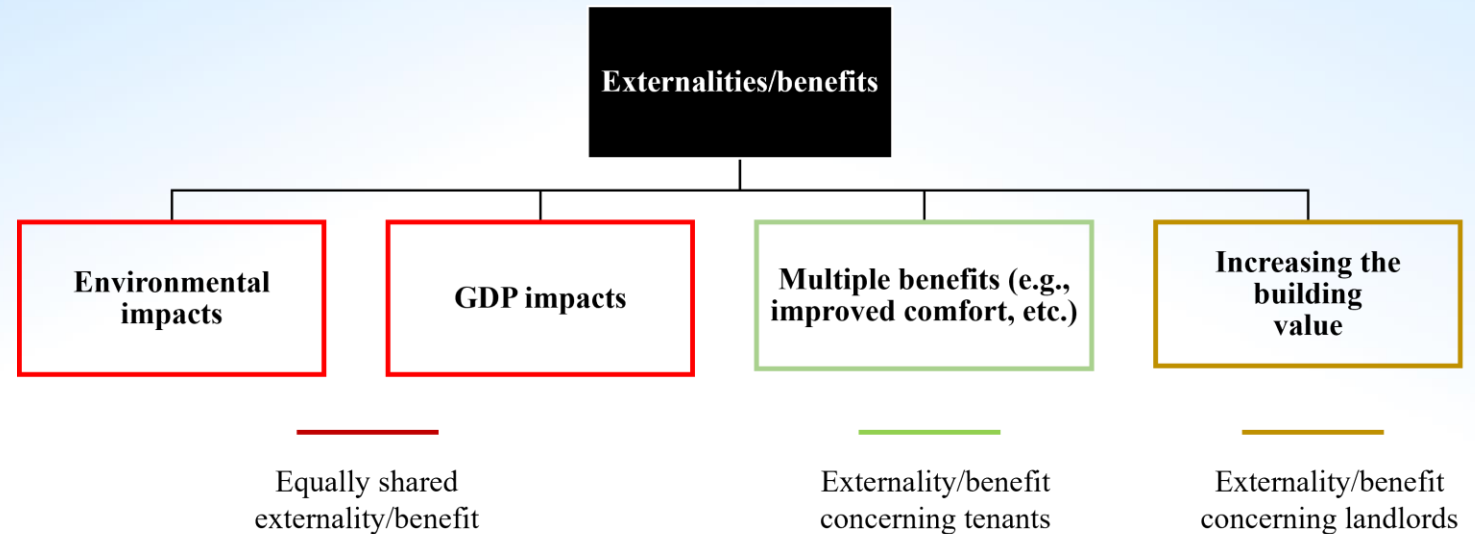
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THE SPLIT INCENTIVES QUANTIFICATION TOOL

(2/4)

- 1 Quantification of the estimated energy savings
- 2 Quantification of the positive externalities
- 3 Estimation of increase in rental price due to both sides' benefits



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THE SPLIT INCENTIVES QUANTIFICATION TOOL (3/4)

Household characteristics			Annual Energy Savings (kWh) due to	
1				
2	Country		Household category	
3	Construction Year			
4	Heating source	-	Household heating technology	
5				
Energy efficiency scenarios				
6				
7				
8				
Energy costs				
9				
10	Heating oil price	€/kWh		
11	Natural Gas price	€/kWh		
12	Electricity price	€/kWh		
13	Other	€/kWh		
14				
Energy efficiency intervention costs				
15				
16		€		
17				
18				



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THE SPLIT INCENTIVES QUANTIFICATION TOOL

(4/4)

Annual Energy Savings (€) due to		Building envelope and windows upgrade and heating technology change	
Household category		Greece (1981-2000)	
Household heating technology	Oil	1,070.0	NPV of the Landlord benefit-Property value increase
			35,667.7
Annual Energy Savings (€) due to		Building envelope and windows upgrade and heating technology change	
Household category		Greece (1981-2000)	
Household heating technology	Oil	1,070.0	NPV of the Tenant Benefits - Energy Savings
			18,632.6
NPV of Multiple Benefits (€) due to		Building envelope and windows upgrade and heating technology change	
Multiple benefits	10%	1,863.3	NPV of the Tenant Benefits - Multiple benefits
			1,863.3
		NPV of the total Landlords' benefits	35,667.7
		NPV of the total Tenants' benefits	20,495.9
		Increase in rental price due to tenants benefits (€)	98
		Increase in rental price due to landlords benefits (€)	171
	Discount rate (%)	3%	63.5%
	Investment's lifetime (years)	25	36.5%
			monthly basis
			monthly basis
Energy Efficiency Intervention costs		62	monthly basis

Better understanding of the split incentive issue.

Enhance the uptake of energy efficiency investments in the national level.



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TEESlab - Technoeconomics of Energy Systems laboratory
Independent research unit providing market-oriented solutions in support of the transition to low-carbon energy systems!



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The ENPOR project:



[ENPORproject](https://www.linkedin.com/company/enporproject)



www.enpor.eu

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