Project EFPORE-SE
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E/FPoRe
Energy Fuel
Poverty
Recommendations

Supporting energy-poor households via deep renovations: Lessons and recommendations from the REVERTER project

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Decision-making under poverty

Vulnerability fundamentally shapes how people make choices:

- **Short-term focus:** focus on urgent needs (food, bills, avoiding eviction) rather than long-term benefits related to reduced energy bills years ahead.
- **Limited cognitive bandwidth:** face constant stress from juggling bills, debt, or unstable work that reduces mental capacity to plan energy retrofits- even if support schemes exist, the paperwork, rules, and uncertainty can feel overwhelming.
- **Risk aversion:** fear the risk of debt or unforeseen costs during renovations (e.g., hidden structural problems) - even subsidised loans can feel unsafe if income is insecure.
- **Uncertainty of savings:** distrust promised savings because deep renovations' benefits depend on energy prices, future housing tenure, and proper installation.
- **Liquidity constraints:** do not have savings or access to affordable credit to finance upfront costs, even if payback is quick.

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The irony of poverty

Vulnerable households often pay more for basic services because poverty forces them into decisions that perpetuate higher costs and worse comfort:

- **High energy bills despite inefficient housing:** live in older, poorly insulated dwellings with inefficient appliances.
- **“Low-road choices” trap:** choose cheaper, low-quality repair solutions because they can’t afford large upfront renovations, but this increases costs long-term.
- **Inaccessible subsidies:** even when public support schemes exist, administrative burdens, lack of trust in institutions, and difficulty pre-financing expenses exclude the poorest.

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REVERTER at a glance

REVERTER developed nine deep renovation roadmaps, based on the “worst-first” principle and tailored to the characteristics of the **four pilot areas** (Brezovo-Bulgaria, Athens Urban Area-Greece, Riga-Latvia and Coimbra-Portugal), aiming to **alleviate energy poverty through the deep renovation** of houses occupied by **vulnerable households**.

The pilot implementation of the roadmaps included the creation of **“one-stop shops” (OSS)** to address market, information and behavioural failures and support **vulnerable households** to enrol in subsidised energy efficiency improvement programmes

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One Stop Shops

Four pilots with different climate conditions, building types and socioeconomic characteristics

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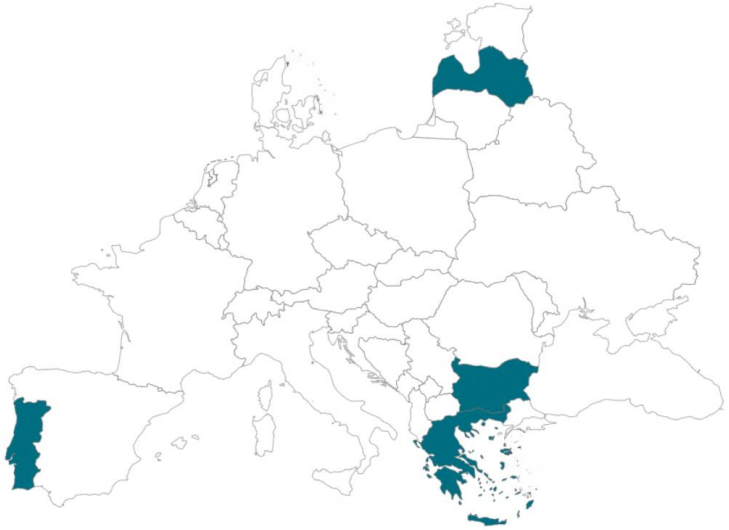
Rīgas energoefektivitātes informācijas centrs

https://renove.lv/



REVERTER
Balcão único para renovação energética dos edifícios

http://renovar.coimbra.pt/

REVERTER
Обновяване. Ефективност. Устойчивост.

https://reverter-brezovo.bg/

REVERTER
Ενεργειακή αναβάθμιση κατοικιών: όλες οι υπηρεσίες σε μία επίσκεψη

https://energeiakistegi.gr/

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REVERTER's interventions

- OSSs to guide households through the application process to simplify decision-making
- Trusted intermediaries as ambassadors (e.g. social workers and community-based organisations) to bridge trust gaps, explain benefits, and reduce perceived risk
- Awareness and trust-building campaigns specifically targeting energy-vulnerable households, with simplified, non-technical communication

Local activities

- 4 questionnaire surveys to gain direct insight into the pilot areas and to assess the capacity needs of vulnerable households using a sample of more than 1,500 households
- Training of 30 OSS staff and 80 local professionals, university students, community workers and other volunteers as Energy Ambassadors (EAs)
- Between April 2024 and October 2025:
  - 1,660 home consultations conducted by the EAs
  - 1,600 in-office visits hosted by the OSSs
- 30 in-person social events (attracting more than 1,000 people) and outdoor and online advertisement campaigns (the local social media had more than 265,000 views from approximately 115,000 users)

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Main achievements (and food for thought…)

Table 1. Pilot status (OSS visits, enrollments, retrofits and applications)

Pilot	Home visits	OSS visits	EP households enrolled on subsidy schemes	Retrofits	Approved applications	Applications - Pending to be approved
Brezovo (BG)	501	236	39	36	0	0
Athens Urban Area (GR)	790	330	15	0	0	15
Riga (LV)	209	952	1,461	0	42 (MFBs)	0
Coimbra (PT)	160	74	325	100	225	0

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A brief explanation..

- **Brezovo:** Absence of a suitable subsidy scheme in the reference period limited scale – renovation of 2 social buildings (public funds) and 1 multi-family plus 33 single-family private homes (private funds).
- **Athens:** The national programme (“Exoikonomo 2025”) was open for 95 days during the OSS start-up phase. In addition, restrictive income thresholds, rental-contract conditions, capped eligible budgets, and priority rules reduced participation; four in five initially interested households abandoned the application process at the first stage.
- **Riga:** The national scheme and municipal co-financing for technical documentation, and the well-known OSS enabled 42 multi-family building applications to be approved. Procedural simplification (post-approval documentation) accelerated access.
- **Coimbra:** Municipal leadership, funding directed to the municipality, standardised specifications, continuous project management by municipal architects, and the annual programming of funding explain performance.

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Some (hard) lessons learnt (1)

- Building links with the local community is a time-consuming and painful process - the three new OSSs in Athens, Brezovo and Coimbra have had a small number of visits compared to the OSS in Riga (active about 5 years)
- Entering the homes of very vulnerable households is even harder, not to say impossible, only through local social workers and trusted members of their community (e.g. representatives of local authorities in small settlements)
- Finding volunteers willing to commit and act as ‘Ambassadors’ is a difficult task – only those who act as volunteers in general or who are motivated (e.g. university students) play an important role
- Identifying the right communication channels is not a straightforward process

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Some (hard) lessons learnt (2)

Enrolling vulnerable households in energy-saving programs (especially during the project) proves to be a Herculean task in several cases:

- Poorly designed/inappropriate programs (e.g. low subsidy rates, emphasis on specific types of buildings, etc.)
- Administrative barriers, e.g. ownership status, bureaucracy, etc.
- Extraordinary conditions, e.g. the ‘cost of living crisis’
- Lack of equity/ access to bank financing
- “Heat or eat” or “pay the loan or lose the house” dilemma
- ‘Biased’ decision-making related to stress, cognitive load, worsened cognitive functions, and present-oriented behaviour

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Some recommendations for…

More effective OSS:

- Co-funded and professionalised OSS using trusted intermediaries in tiered models (energy ambassadors for outreach, specialists for assessments, social workers for complex cases)
- Integrated services available free of charge to vulnerable households
- Outreach campaigns specifically targeting low-income households: frame renovations in terms of immediate comfort and stability of expenses rather than long-term savings, use mobile OSSs, develop digital OSS to extend reach and efficiency
- Post-works monitoring with public dashboards to provide transparent updates on the performance and state of energy retrofits

But more importantly….

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Some recommendations for…

More inclusive energy retrofit subsidy schemes:

- Establish progressive subsidy scales to avoid both drop-out and free riding effects, with higher subsidy rates - ideally 100% - for the lowest-income households and set up guarantee-backed zero-interest loans
- Avoid pre-financing requirements (even for the application)
- Promote energy savings guarantees to reduce perceived uncertainty
- Pair renovations with temporary energy cost reliefs to avoid “renovation-induced poverty”
- Support collective renovations at the neighbourhood scale, where peer effects, trust, and economies of scale can reduce certain barriers

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Thank you!

Deep renovation is a social right – we need to shift the discussion from "incentives" to "entitlements"

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