Energy efficiency and renewable energy sources in buildings: Closing the implementation gap

An Interreg Europe Policy Learning Platform event

Capacity Building
19 June 2025
Chisinau, Moldova

Summary: The Interreg Europe Policy Learning Platform, in co-operation with the Ministry of Energy of the Republic of Moldova, organised a capacity building event on 19 June 2025 in Chisinau. Moldova has made excellent progress in transposing the EU energy acquis but is searching for solutions to increase the renovation rate of its buildings and speed up the roll-out of renewables. As such, this event focused on technical solutions and skills for improved energy performance, as well as approaches for scaling and speeding up renovations, closing with group work to envision the policy solutions needed in the Moldovan context.

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1.Highlights

Policy Framework

The Republic of Moldova became an EU candidate country in June 2022 and began negotiating accession in June 2024. In the energy field, Moldova has been a party to the Energy Community Treaty since 2010, under which it is committed to implementing EU law on energy, develop a robust regulatory framework and liberalise energy markets. Transposition of EU law is progressing well, but implementation on the ground is still lagging. In this framework, the Ministry of Energy of the Republic of Moldova identified decarbonisation of its building stock as a key challenge, with much of it characterised by low energy performance. As such, the Ministry was interested to explore policies and programmes in reducing residential energy consumption through energy efficiency and renewable energy integration.

Moldova's residential sector is the country's largest energy consuming sector. Most buildings were constructed between 1950 and 1990, with low energy efficiency. The country's legal framework has been harmonised with the EU and an energy agency has been established, with an Energy Efficiency Fund for energy auditing. Efforts are being made to renovate public buildings as examples, at 3% of surface per year, in line with EU policy. A first apartment building pilot was implemented in Bălți, Moldova, revealing some challenges related to financial institutions, working with residential associations, and convincing inhabitants of the benefits of renovation, all of which will need to be overcome to renovate at scale. Renewables are advancing rapidly with a target of 30% by 2030, but with expectations that 20% will already be reached by the end of 2025. An eco-voucher scheme has been launched for households to replace poor performing appliances.

The European Union has several ongoing co-operation activities with Moldova in the energy field, with 1 billion EUR in support through loans and grants under the Global Gateway Strategy. 325 million EUR has been allocated for district heating upgrades, expected to start in 2026, while a new agency is administering 3 million EUR in technical assistance. A new energy efficiency fund, FEERM, was established in April 2024 targeting the residential sector and mainly focused on multi-occupancy buildings (which make up 75% of dwellings).

Technical Solutions and Skills for Improved Energy Performance

Examples from good practices presented revealed that while Moldova's Soviet building stock may be viewed as a negative legacy, there are advantages to such buildings. The limited number of standard building types (mentioned by participants to be around 10 in Moldova) were constructed based on prefabricated components, which can be leveraged as an advantage for renovation. Prefabricated elements can be produced with consistent quality and save installation time on the construction site.

Presenters noted that a vital first step is to understand the buildings in the territory, surveying the types of buildings and knowing their quality, technologies and parameters. It is also essential to follow which pilot actions can be implemented for each type to test new solutions. Pilots are very important not only for testing solutions, but also as a demonstration and communication tool – once people see the pilots and real renovations, they want it for themselves. Technical solutions have already been trialled in similar building stocks in other countries (including Slovakia and Germany, see below) which can provide lessons for Moldova. The benefit of working at the district level, tackling multiple buildings of similar typology, should also be noted, enabling co-ordination cross multiple buildings and construction companies to create scale.

Using new technologies also requires new skills for them to be installed and used correctly. Scarcity of specialist and experts in renovation works should be addressed. It is advisable to inform the market early about the expected rise in demand of skilled professionals, both blue and white collar, to allow them to get ready, get trained and get certification. Training is essential to ensure that interventions are well implemented, as bad renovations have an impact in losing trust amongst citizens. Energy academies with examinations for some of the qualifications are a possible solution.

Scaling and Speeding Up Renovation

A major challenge for the renovation wave is the scope and size of the challenge, and the sheer number of buildings to be tackled. There are several measures that can speed up renovation and make it more accessible, while also achieving improved cost efficiency by tackling multiple buildings at once and optimising resource use.

One-Stop-Shops are an essential tool which can enable the implementation of building renovation works and enable access to finance, although some OSS depend on project-based EU funding and some charge a (modest) fee for their services. The OSS should act as a single point of contact, advising citizens on energy saving potentials and accompanying home owners throughout the entire renovation journey. That includes amongst other provision of information, fostering agreements for renovation amongst the owners, technical solution specification, preparation of tenders, access to financing, support with subsidy application for owners. OSS should work at the local level as they need the proximity to the actual buildings and the home owners. They have a public mission but are usually structured under private law, giving them more flexibility than public bodies.

Shared and supported self-renovation is an interesting approach to bring down the costs of renovation works as it involves volunteers from the community. This also creates ownership of the renovation works and allows owners and neighbours to contribute to the renovation project. A spirit of volunteering is fostered, and the social impact is high, with strong impact on the local economy, saving costs and creating local competence.

Finally, joint procurement is an excellent means to save costs through scale economies. Experience from joint procurement of PV systems shows savings in the order of 30% compared to individual purchases. Public bodies can gather and aggregate demand, collect offers and select the supplier, making better use of financial resources. The model could also apply for other products and technologies necessary for renovation. Joint procurement also requires only one contracting authority and frees the others from the administrative and legal burden.

2. Good practices

Technical Solutions and Skills for Improved Energy Performance

- **Retrofitting apartment buildings to reduce energy demand and integrate renewables** – Bratislava, Slovakia (EU-GUGLE FP7): Like Moldova, Slovakia has many Soviet-era multi-occupancy buildings. Under the Energy Performance of Buildings Directive, Slovakia has amended its domestic legislation to improve requirements for building energy performance. Within the **EU-GUGLE** project, deep renovation pilots were implemented in Bratislava, replacing windows and exterior doors, insulating external walls and roofs, and installing a decentralised controlled ventilation system with heat recovery in each apartment, amongst other measures, resulting in energy consumption for heating decreasing by 60%. Interventions were also made to make the buildings more attractive to improve surrounding areas.

- **Energy renovation of Soviet-era apartment blocks** – Berlin, Germany: As in Slovakia, eastern Germany also has a significant number of Soviet-era building blocks. The technical condition of many of these residential buildings is poor, with extremely high energy consumption, as well as structural defects and poor safety standards. As such, a project implemented in Marzahn-Hellersdorf, Berlin, sought the long-term modernisation of this housing stock. Starting with a pilot project, discussions were held with the inhabitants to understand better their concerns and explain to them the process, followed by first measures deemed as the most urgent, to demonstrate quick impact. Renovations also aimed to improve the surrounding land. Renovations were able to reduce both energy consumption and CO_2 emissions to less than 50% of the Berlin average.

- **Improving Skills and Qualifications in the Building Workforce** – Cyprus: Energy efficient renovation requires new skills all along the value chain, but in particular for installers and renovators. In Cyprus, the national energy agency has established the Energy Academy to arrange educational activities, run seminars and hold examinations to certify installers. Cyprus also participates in the WE-Qualify project to promote continuous vocational education and training, and Yenesis which promotes green employment opportunities to young people. Together, the measures should enable long-term availability of renovation skills, as well as quality interventions.

Scaling and Speeding Up Renovation

- **Atnaujinkime Miestą**, **One-Stop-Shop** – Vilnius, Lithuania: Vilnius' OSS is an excellent example, targeted towards multi-family buildings. 70% of residents in the city live in apartment buildings constructed before 1993, with poor insulation and installations. The OSS engages and communicates with citizens, oversees project development, facilitates access to finance, and renovates the territories of neighbourhoods (surrounding public space). The process involves intensive work with

homeowners, establishing and presenting investment plans and guiding them through the whole renovation project. Works have brought Class F buildings up to Class B.

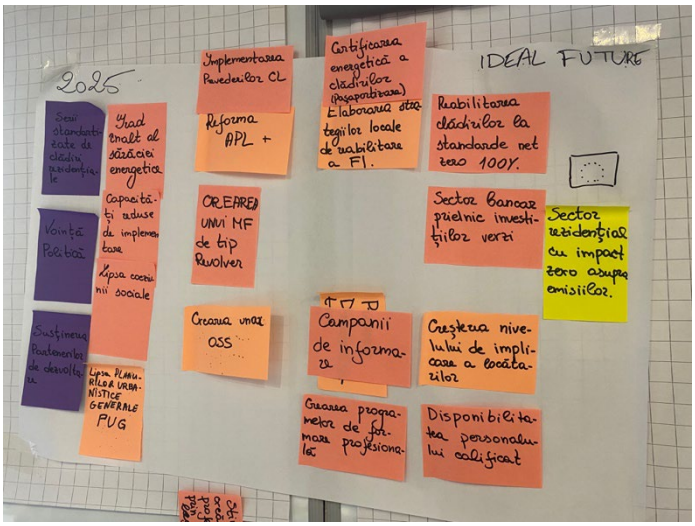
- **Citizen-based building renovation – Normandy, France (**CLEAN**):** Citizen renovation involves citizens in the governance, ownership and implementation of renovation processes, enabling lower cost renovation, creation of new skills and stimulation of the local economy. It is particularly suited for lower income households, with volunteers performing the renovation, supported by a building professional, helping to tackle the most immediate challenges and low-hanging fruit, and bringing social benefits to at risk groups.

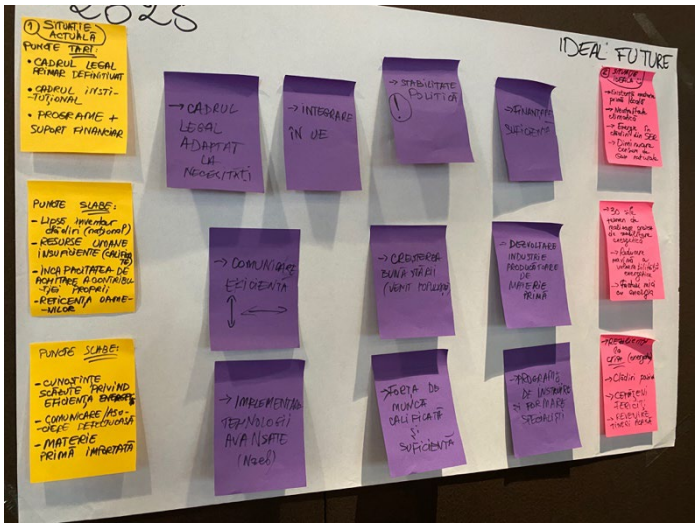
- **Joint public procurement of PV systems – North Karelia, Finland (**AgroRES**), Croatia (**ACROSS**):** Joint procurement of technologies can help to bring down costs by reducing administrative burden and enabling economies of scale. In North Karelia, Finland, a rural area with solar potential, a joint procurement initiative was launched for households and SMEs to purchase PVs, resulting in purchase at 30% less than the market average. A similar approach was applied in Croatia for procurement of PV for public buildings, initiated by one central public procurement authority for twenty contracting authorities. This resulted in a contracted value of 35% less (EUR/kWp) than the real market value.

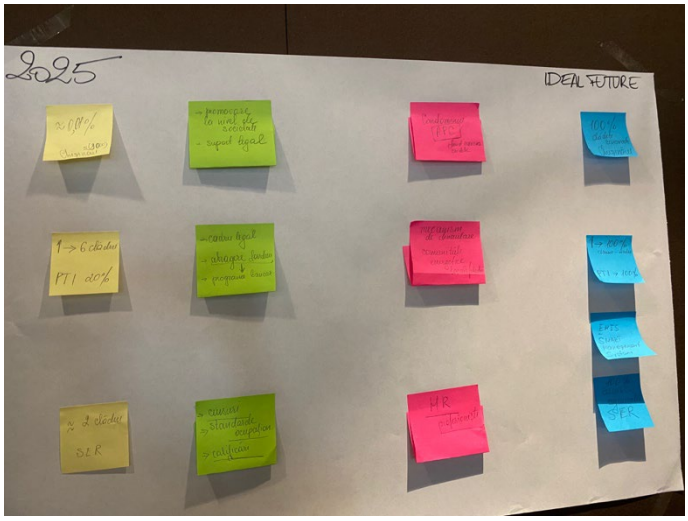
For more information on the good practices, see the accompanying slides.

Policy Design Workshop

- **Moldovan solutions to overcome barriers to building renovation:** The final session involved group work amongst the participants using a 'Future Backwards' methodology. Participants defined the current situation, and then, working backwards, they imagined an ideal situation, identified success factors to get there, and defined the necessary steps to reach the ideal situation. Each group presented their results to the group, and conclusions have informed the next steps, below.







3. Next steps

Based on the discussions, some recommendations can be drawn up for policy measures and next steps for the participants:

- Energy targets at the national level should be broken down to lower administrative entities to better distribute and define responsibilities. It helps to empower the cities who are closer to the actual building owners;
- Under these targets, cities should commit to sustainable energy targets, fixed in their local energy strategies, like Vilnius (e.g. Sustainable Energy and Climate Action Plans). This makes them responsible for driving the energy renovation in their municipalities;
- Implement pilot projects for different building typologies to test approaches and act as demonstrators which can communicate the benefits of energy renovation;
- A single information point is needed to provide guidance and advice to homeowners and inhabitants; OSS structures are the best structure, but should be implemented at city/region level to be close to the reality on the ground;
- Ensure there is a way to certify quality installers and to train people in emerging skills – poor renovation will hinder widespread adoption. A pool of certified experts is also useful for OSS to assist homeowners in project development;
- Make use of join procurement for acquiring technologies to renovate multiple buildings at once. This can be done for both public and private buildings;
- Further collaboration with international partners could be enabled by the Policy Learning Platform, e.g.:
  - Joint learning activity on renovation of Soviet-style housing blocs. Following the invitation from the speaker Maria Melnikova, a peer review hosted in Berlin could be requested by the Moldovan Ministry of Energy to further explore the renovation process.
  - Potential to explore a peer review on more specific sub-topics, such as one-stop-shops, or SECAP development.

Discover additional resources from the Interreg Europe Policy Learning Platform:

Policy Briefs

- Decarbonising heating and cooling
- Empowering Citizens for Energy Communities
- Fostering skills for the energy transition
- Funding energy efficiency through financial instruments
- One-Stop-Shops for Energy Efficiency
- Tackling energy poverty with low-carbon interventions

Webinars & Workshops

- District approaches to sustainable energy
- Enabling the renovation wave
- How to support the rural green transition
- Improving energy performance of social housing
- Mobilising citizen financing for renewables
- One-stop-shops for energetic refurbishment
- Renewable energy financing for the public sector
- Smart energy management

Peer Review & Matchmaking Reports

- Financing and incentivising energy renovation of condominiums – City of Lille, France
- How to create and run an energy One-Stop-Shop? – Energy Centre of the Ústí Region, Czechia
- Improving energy performance of public buildings - Banja Luka, Bosnia & Herzegovina
- Reducing the carbon footprint of buildings – Partnership of Latvian Constructors

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