

# Collection of best practices from EU-funded projects

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LIFE BIO-BALANCE

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| <b>Action</b>      | <b>C7.2</b>   |
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| <b>Summary</b>     | <b>Best practices from EU-funded projects were collected which can reduce, replace solid biomass energy use, or make it more efficient in the field of energy efficiency, energy poverty and heat&amp;power sector.</b> |

## **INTRODUCTION**

### **About LIFE-BIOBALANCE**

Co-funded by the European Union LIFE Programme, the overall aim of the Balancing solid biomass for climate neutrality in CEE countries (LIFE BIO-BALANCE) project is to support EU Member States to shift to a low-carbon and resilient economy by ensuring that solid biomass is produced and used sustainably at all levels.

It builds multi-stakeholder, multi-sector policy and knowledge sharing processes at the national and local level to ensure that biomass is balanced with other feasible alternatives and only solid biomass with a high sustainability safeguard is included in updated national National Energy and Climate Plans (NECP), Long Term Strategies and on local level in the Sustainable Energy and Climate Action Plans.

### **The aim of this best practice collection**

The Fit for 55 package requires more ambitious climate targets from Member States, which should be reflected in the revision process of the NECPs in 2023-2024. The higher renewable energy and greenhouse gas reduction target should not lead to decrease the carbon sink in the LULUCF sector, or further increase biodiversity loss. Therefore, it is essential that instead of relying more on forestry biomass, the new policy measures should be more relying on how heat demand could be decreased by energy efficiency, support firewood-dependent energy poor communities, and replace high-risk forestry biomass-based energy production by low-carbon renewable energy sources.

Besides good examples from existing NECPs, collected also by LIFE BIO-BALANCE in other action, there are other innovative ideas, implemented by EU-funded projects which can be transferred to national-level policy measures. In this report, LIFE BIO-BALANCE assessed selected existing NECPs, and collected 35 good practices in the area of energy poverty, energy efficiency, heat & power, and innovative financing.



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## METHODOLOGY

The EU project database, [CORDIS](#), stores information about all EU-funded projects which were implemented before or under implementation. Projects falls under the following subprogram under the Secure, clean and efficient energy programme, with the total of EUR 5931,2 million fund, were screened:

- 3.3.1 - Reducing energy consumption and carbon footprint by smart and sustainable use
- 3.3.5 - Robust decision making and public engagement
- 3.3.7 - Market uptake of energy innovation - building on Intelligent Energy Europe

From the total of 495 projects, 70 were pre-selected for scoring. For this exercise, methodology of similar collection, done by the LIFE Plan Up project was adopted. The scoring methodology was the following.

| Topic     | Criteria                              | Score | Score description |
|-----------|---------------------------------------|-------|-------------------|
| Relevancy | Is the measure relevant to the topic? | 1     | low extent        |



|               |  |   |   |
|---------------|--|---|---|
|               | (energy poverty, energy efficiency, heat & power)  | 2 | medium extent   |
|               |  | 3 | high extent   |
| Replicability | Is it possible to replicate the measure in other - especially CEE - countries?   | 1 | only with major changes   |
|               |  | 2 | yes, in the CEE region  |
|               |  | 3 | yes, EU-wide  |
| Impact        | Degree the measure is able to influence energy poverty/energy efficiency (not relevant for heat & power)               | 1 | low extent  |
|               |  | 2 | medium extent   |
|               |  | 3 | high extent   |
|               | Degree of ability to reduce forestry biomass demand  | 1 | low extent  |
|               |  | 2 | medium extent   |
|               |  | 3 | high extent   |
| Feasibility   | If it is a technical solution, is it mature enough to implement? - only relevant for heat & power                      | 1 | low extent  |
|               |  | 2 | medium extent   |
|               |  | 3 | high extent   |
|               | Degree of financial need for implementation  | 1 | implementation possible only with massive investment, long payback period |
|               |  | 2 | investment is needed, but short (< 10y) payback                           |
|               |  | 3 | only regulation change is needed  |
| Adaptability  | Degree to which the measure includes procedures for strategic revision and is able to adjust to changes and challenges | 1 | low extent  |
|               |  | 2 | medium extent   |
|               |  | 3 | high extent   |

In the field of energy efficiency and heat & power, we have selected 10 practices, and in the field of energy poverty - 8, top scored innovative ideas, and included 7 additional practices in financing, as a horizontal topic. These best practices are presented in the following chapters, ranked by score.



## ENERGY POVERTY

|   |  |                      |           |
|---|--|----------------------|-----------|
| Idea  | <b>Empowering Energy Poor Citizens through Joint Energy Initiatives</b>  |                      |           |
| Project title                                   | POWERPOOR  |                      |           |
| Involved CEE countries                          | Estonia, Latvia, Hungary, Croatia, Bulgaria, Greece  | Under implementation |           |
| Objective                                       | Development of programs/schemes to support energy poor citizens and special use of alternative financing schemes such as creation of energy communities/cooperatives, crowdfunding.  |                      |           |
| Scores  | Relevancy: 3   | Replicability: 3     | Impact: 3 |
|   | Feasibility: 3   | Adaptability: 3      | Sum: 15   |
| Why is it a good practice?                      | <p>The POWERPOOR project will facilitate the sharing of experience and knowledge, as well as the implementation of small-scale energy efficiency interventions and the installation of renewable energy sources, increasing the active participation of citizens. Based on the experience gained and lessons learned from the POWERPOOR implementation, EU policy recommendations and 8 national roadmaps will be developed so that policy makers at all levels of government can learn from the project.</p> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Relevancy for CEE region, replication potential | Broad dissemination and synergy with global and EU initiatives, such as the EU Observatory on Energy Poverty and the (EU and Global) Convention of Mayors on Energy and Climate, as well as the participation of networks in the consortium will enhance the dissemination and use of POWERPOOR results throughout Europe, including in CEE countries, which is why there is a high potential for replication.   |                      |           |



|   |   |                  |           |
|---|---|------------------|-----------|
| Idea  | <b>Using Living Labs to roll out Sustainable Strategies for Energy Poor Individuals</b>   |                  |           |
| Project title                                   | STEP IN   |                  |           |
| Involved CEE countries                          | Greece, Hungary   | Completed        |           |
| Objective                                       | Developing a global methodology for the effective analysis and tackling of energy poverty in three highly challenging locations with diverse characteristics across Europe including: a mountainous region in Greece, a rural area in Hungary and an urban area in the UK with low quality housing.   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 2 | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 3  | Sum: 14   |
| Why is it a good practice?                      | <p>The creation of living labs, including a range of approaches such as energy cafes, advisor visits and ICT systems, will allow local experts and stakeholders to join forces with energy-poor consumers to make effective decisions that will lead to the improvement of the quality of life of participants by maintaining or improving comfort levels and more efficient energy use.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | The CEE region has many locations with similar characteristics – mountainous areas, rural areas and urban areas with different quality of housing that can benefit from the approaches applied in the project leading to energy efficiency, changes in consumer behavior and increasing comfort level.  |                  |           |



|   |   |                      |           |
|---|---|----------------------|-----------|
| Idea  | <b>Toolkit for EU fight against energy poverty</b>  |                      |           |
| Project title                                   | CEES - Community Energy for Energy Solidarity   |                      |           |
| Involved CEE countries                          | Croatia   | Under implementation |           |
| Objective                                       | The overall goal is to facilitate the adoption of behavioral and energy efficiency measures in households with a view to guaranteeing a decent standard of living and health of citizens  |                      |           |
| Scores  | Relevancy: 3  | Replicability: 3     | Impact: 3 |
|   | Feasibility: 2  | Adaptability: 2      | Sum: 13   |
| Why is it a good practice?                      | <p>The project will be implemented after an in-depth analysis of the most successful cases of community energy initiatives to tackle energy poverty in Europe, validates them academically and empirically, supports the overcoming of regulatory and financial barriers, and then creates a toolkit for EU replication through RESCOOPs network of +3000 energy communities in the context of which measures for behavior and energy efficiency in households will be derived.</p> <p>More information is available <a href="#">here</a>.</p>  |                      |           |
| Relevancy for CEE region, replication potential | <p>The project will facilitate the adoption of behavioral and energy efficiency measures in households, create financial and non-financial support schemes to address energy poverty and empower community leaders (and organizations working in adjacent areas such as financial advice, health care or even fire and police services) to identify and deal with energy poverty, establishing quick and responsive networks. The project developers expect to reach more than 19 000 energy poor households and trigger 2M€ of sustainable energy investment with savings of over 7,5 GWh/year. For the CEE region, such a scheme would be relevant and have huge potential for replication.</p> |                      |           |



|   |   |                      |           |
|---|---|----------------------|-----------|
| Idea  | <b>Community solar solution to energize poor households</b>   |                      |           |
| Project title                                   | Eurosolar for all: energy communities for a fair energy transition in Europe (Sun4All)  |                      |           |
| Involved CEE countries                          | -   | Under implementation |           |
| Objective                                       | Develop and design a financial support scheme for renewable energy access for energy-poor households.   |                      |           |
| Scores  | Relevancy: 3  | Replicability: 2     | Impact: 3 |
|   | Feasibility: 2  | Adaptability: 2      | Sum: 12   |
| Why is it a good practice?                      | <p>The programme optimizes social subsidies by transforming them into a profitable investment for the beneficiaries. Solar shares are offered to vulnerable consumers instead of a traditional social subsidy (p.e. to pay overdue utility bills). Beneficiaries of the program will be co-owners of a local photovoltaic installation and the revenue generated from the production and sale of energy will be used to reduce energy bills.</p> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Relevancy for CEE region, replication potential | The project developers envisage replication and up-scaling of the programme is foreseen in at least 10 other EU cities and planned in other cities and regions to become an established programme in Europe.  |                      |           |



|   |   |                      |           |
|---|---|----------------------|-----------|
| Idea  | <b>A social boost to combat energy poverty</b>  |                      |           |
| Project title                                   | POWER UP: Social Energy Market Players To Tackle Energy Poverty   |                      |           |
| Involved CEE countries                          | Czech Republic, North Macedonia   | Under implementation |           |
| Objective                                       | Strengthening the role of regional and local public authorities in the fight against energy poverty by creating local players in the energy market with a social agenda.  |                      |           |
| Scores  | Relevancy: 3  | Replicability: 3     | Impact: 2 |
|   | Feasibility: 2  | Adaptability: 2      | Sum: 12   |
| Why is it a good practice?                      | <p>For energy poor households, pilot schemes for the production of renewable energy and energy efficiency measures will be implemented without having to take the financial risks. Local players in the energy market will be supported with a social program based on a long-term perspective to acquire local knowledge and strengthen the local economy.</p> <p>More information is available <a href="#">here</a>.</p>  |                      |           |
| Relevancy for CEE region, replication potential | <p>These schemes will be co-created with energy-poor households and local stakeholders, leading to at least 2,5 Million EUR investment in sustainable energy before the project ends and involving 55 588 energy poor consumers. Supported by a European city network, a leading UK university, a Belgium cooperative and finance expert, the consortium will build the capacity of more than 160 people in local organizations. This will allow these players to either provide cheap energy to fuel poor households, or reinvesting benefits to carry out energy poverty mitigation measures. An opportunity will be created to disseminate the experience of the European members of the consortium to facilitate replication in CEE and other EU countries.</p> |                      |           |



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| Idea  | <b>Increase the use of renewable energies in vulnerable groups</b>   |                      |           |
| Project title                                   | POWERTY: Renewable energies for vulnerable groups  |                      |           |
| Involved CEE countries                          | -  | Under implementation |           |
| Objective                                       | The overall objective of POWERTY is to increase the mix of renewable energy in vulnerable groups by providing safe and clean energy to vulnerable households.  |                      |           |
| Scores  | Relevancy: 3   | Replicability: 2     | Impact: 2 |
|   | Feasibility: 2   | Adaptability: 2      | Sum: 11   |
| Why is it a good practice?                      | <p>POWERTY will help tackle energy poverty by promoting vulnerable households with adequate energy supplies thanks to renewable energies. Social innovation measures based on greater participation, integration and empowerment of vulnerable groups will be promoted. The project will develop a complete learning process to facilitate an effective knowledge flow among regions, counting on 6 partners with different complementary expertise and different levels of competences (regional/national) which enriches the transfer of knowledge.</p> <p>More information is available <a href="#">here</a>.</p>   |                      |           |
| Relevancy for CEE region, replication potential | <p>The project envisages more than 50 best practices and almost 50 events involving 60 stakeholders will establish 5 Regional Action Plans covering a population of more than 25 million inhabitants. Companies supplying renewable energy will be encouraged through the project to offer technological solutions that are adapted to vulnerable groups, activating their corporate social responsibility. The project considers socio-economic and cultural characteristics of vulnerable groups, so as to redirect actions to tackle energy poverty with a more inclusive approach, adapting forms of financing and technologies to the assessed needs of these groups and using the opportunities offered in this case of renewable energy sources to create employment and integration of these groups in society. Replication will follow.</p> |                      |           |



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| Idea  | <b>Support Network for Household Energy Saving</b>   |                  |           |
| Project title                                   | ASSIST   |                  |           |
| Involved CEE countries                          | Italy & 9 EU countries   | Completed        |           |
| Objective                                       | European market activation and policy orientation project to contribute to tackle energy poverty and support vulnerable consumers adopting an holistic and multidisciplinary approach, addressing both the energy and social aspects of energy poverty.  |                  |           |
| Scores  | Relevancy: 3   | Replicability: 2 | Impact: 2 |
|   | Feasibility: 2   | Adaptability: 2  | Sum: 11   |
| Why is it a good practice?                      | <p>The built model supports users in need and shows that it can be successfully adopted by various public and private users working in different sectors - from energy to social networks, from banking to healthcare, from non-profit associations to private companies. The ASSIST model is based on the figure of the Home Energy Advisor (HEA) and a 3-step process: education - networking - action. HEA is a professional already working on the ground, able to provide support to people, not only in the energy sector. It has the necessary competences and subject matter knowledge to provide first-hand answers to all questions and needs related to energy poverty: from unpaid bills to contract changes, from requests for financial assistance to using an efficient appliance.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | <p>The results achieved have a high level of exploitability, specifically:</p> <ul style="list-style-type: none"> <li>● tools and documents on the state of energy poverty in Europe,</li> <li>● training platform and the training course for the HEAs training as well as the HEAs working ICT environment and all the tools and resources defined for the action,</li> <li>● the national scheme of HEA and the relative national network of HEAs,</li> <li>● the Policy Framework Paper on energy poverty.</li> </ul> <p>As the tool is being applied in 9 countries, this raises the adaptability and chance that it can be replicated further in the CEE region.</p>   |                  |           |



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| Idea  | <b>Social entrepreneurs engaging vulnerable households to co-design new business schemes</b>  |                      |           |
| Project title                                   | POWER UP: The catalyst for social innovation in the energy market   |                      |           |
| Involved CEE countries                          | France, North Macedonia and 6 other countries   | Under implementation |           |
| Objective                                       | The overall objective of POWER UP! is for cities to become local energy market players with a social agenda. This will be realized by pilot schemes for households in energy poverty, developing local energy market players with a social agenda, strengthening the local economy and replication actions.   |                      |           |
| Scores  | Relevancy: 2  | Replicability: 2     | Impact: 2 |
|   | Feasibility: 3  | Adaptability: 2      | Sum: 11   |
| Why is it a good practice?                      | Six pilot schemes are to be developed in six locations across Europe: Eeklo (Belgium), Heerlen (the Netherlands), in the Campania area (Italy), in the Czech Republic, Valencia (Spain) and Skopje (North Macedonia). They will involve local households and stakeholders, including city administrations, utilities, energy communities, etc, and contribute to mobilizing 2.5 million EUR benefitting 55 588 energy poor consumers. A key aspect will be the ability for the generated savings of poor households to be reinvested to implement energy poverty mitigation measures.<br><br>More information is available <a href="#">here</a> . |                      |           |
| Relevancy for CEE region, replication potential | CEE countries are particularly affected by energy poverty and energy poor consumers and households, and the pilot in North Macedonia will showcase how the stakeholder approach and reinvestment mechanisms and incentives may be adopted by CEE energy poor households. The pilots and partnerships can be replicated elsewhere, especially in the Western Balkan countries.   |                      |           |



## ENERGY EFFICIENCY

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|---|--|---------------------|-----------|
| Idea  | <b>Energy labels for existing heating appliances</b>   |                     |           |
| Project title                                   | HARP - Motivating consumers to use more efficient heating systems  |                     |           |
| Involved CEE countries                          | -  | Already implemented |           |
| Objective                                       | <p>The main idea behind the project is to motivate individuals to plan the replacement of their often old and inefficient heating appliances, with more efficient alternatives. It is done so by an online tool, where individuals can provide details about their existing heating appliances, and generate an energy label for those, old and inefficient heating appliances, which were installed before the energy labeling obligation.</p> <p>More information is available <a href="#">here</a>.</p> |                     |           |
| Scores:   | Relevancy: 3   | Replicability: 3    | Impact: 2 |
|   | Feasibility: 3   | Adaptability: 3     | Sum: 14   |
| Why is it a good practice?                      | Energy label is a well-known support decision tool to communicate and motivate the consumer to replace its heating system with modern high-efficiency and renewable solutions.   |                     |           |
| Relevancy for CEE region, replication potential | EU-wide, market assumptions are that more than 50% of these equipment perform energy class C or lower. This rate is probably even higher in the CEE region. This such an easy tool and simple information can drive consumer behaviour and speed up the process of retrofitting the existing heating system.   |                     |           |



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|---|---|----------------------|-----------|
| Idea  | <b>Standards and requirements for the deep energy renovation</b>  |                      |           |
| Project title                                   | EUROPA - Energy Efficiency Subscription for Deep Renovation With Performance Guarantee  |                      |           |
| Involved CEE countries                          | Latvia  | Under implementation |           |
| Objective                                       | <p>The project is intended to define a common set of standards and requirements for the deep energy renovation (the so-called Energy Efficiency Subscription), focusing on:</p> <ul style="list-style-type: none"> <li>• Products standards</li> <li>• Level of expertise of craftspeople and professionals</li> <li>• Technical standard investment package for deep renovations</li> <li>• Contractual specifications</li> <li>• Measurement and verification of the performance.</li> </ul> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Scores:   | Relevancy: 3  | Replicability: 2     | Impact: 2 |
|   | Feasibility: 3  | Adaptability: 3      | Sum: 13   |
| Why is it a good practice?                      | The common standard can build trust and transparency between house owners, constructors and financial institutes, and therefore speed-up the deep renovation rate.  |                      |           |
| Relevancy for CEE region, replication potential | In the CEE region generally renovations are underregulated or at least the level of enforcement is low, and only incomplete. These kinds of standards can help household owners to decide on well-planned, deep energy renovation, instead of ad-hoc decisions. Replication needs engagement from the government to set these standards in the national regulations.  |                      |           |



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| Idea  | <b>Building skills for construction of NZEB</b>   |                     |           |
| Project title                                   | NEWCOM - New competence for building professionals and blue collar workers – certified qualification schemes to upgrade the qualification for building nZEBs  |                     |           |
| Involved CEE countries                          | Hungary, Slovakia   | Already implemented |           |
| Objective                                       | <p>NEWCOM focused on the development of missing qualification and certification schemes for blue collar workers and building professionals who inspect and control the most relevant qualities with a specific focus on mutual recognition. To support the construction industry, NEWCOM developed nearly zero-energy building (NZEB) training schemes. The training is modular with units either stand-alone or complementary to pre-existing courses, focusing on three topics. Firstly, Flat Roofs and Roof Waterproofing, taking a lifelong service approach, including planning and installation of green roofs and energy efficiency measures. Secondly, Ventilation Installations, including heat recovery, noise protection, controlled airflow and smart demand systems. Thirdly, Quality Assurance in the planning, construction and operation phase of NZEBs, including aspects on indoor air quality, quality of the thermal building envelope and the energy system, including cost-efficiency measures. In addition, a competence database was created to help standardise mutual recognition of skills across Europe. More information available <a href="#">here</a>.</p> <p>Project also targeting the improvement of construction skills of nZEB buildings includes <a href="#">BUSLeague</a>, <a href="#">SEetheSkills</a>, <a href="#">Train-to-NZEB</a> and <a href="#">TRAIN4SUSTAIN</a>,</p> |                     |           |
| Scores  | Relevancy: 3  | Replicability: 2    | Impact: 3 |
|   | Feasibility: 2  | Adaptability: 3     | Sum: 13   |
| Why is it a good practice?                      | Yet, construction of high-quality sustainable buildings suffers from inadequate quality assurance during construction/renovation, a shortage of relevant and up-to-date skill sets as well as low demand from owners and developers. Professional training and standardized skills can fill these gaps.   |                     |           |
| Relevancy for CEE region, replication potential | Inadequate quality and lack of quality control is a huge hurdle in the construction section in the CEE region. Even though this and similar projects built up a scheme for improving skills, governmental support is needed to spread this knowledge transfer.  |                     |           |



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| Idea  | <b>One-stop-shop model for energy efficiency</b>   |                      |           |
| Project title                                   | RenoHUb - Integrated Services to Boost Energy Renovation in Hungarian Homes  |                      |           |
| Involved CEE countries                          | Hungary  | Under implementation |           |
| Objective                                       | <p>Creating a “one-stop-shop” scheme, as a form of on-line platform and physical advisory hotspots in order to increase the renovation rate. The renovation hub addresses the entire value chain of home retrofit: from social, behavioural, communication and capacity building aspects through supporting the decision-making and the technical implementation, up to ex-post assessment of energy and cost saving. The project also builds up the business model to be financially sustainable after the project ends.</p> <p>More information available <a href="#">here</a>.</p> <p>There are other projects aiming to create one-stop-shop energy retrofitting models in the CEE region, like <a href="#">Rhodoshop</a> in Bulgaria, the <a href="#">outPHit</a> also under implementation by Bulgarian project partner, and the <a href="#">Save the Homes</a>, and the <a href="#">REFURB</a> project including a partner from Slovenia.</p> |                      |           |
| Scores  | Relevancy: 3   | Replicability: 2     | Impact: 3 |
|   | Feasibility: 2   | Adaptability: 3      | Sum: 13   |
| Why is it a good practice?                      | In order to reach the desired level of deep energy renovation rate, complex and integrated assistance are needed for homeowners, currently lacking information about the technical and financial requirements for deep renovation. This is especially true in light of the energy crises.  |                      |           |
| Relevancy for CEE region, replication potential | The need for speeding up the deep renovation rate is especially relevant for the CEE region, where the energy performance of the existing building stock is below the EU-average. In the case of a viable business model, the one-stop-shop concept can be replicated without governmental support.  |                      |           |



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| Idea  | <b>Renovation roadmap for deep renovating residential buildings</b>  |                     |           |
| Project title                                   | iBROAD - Individual Building (Renovation) Roadmaps   |                     |           |
| Involved CEE countries                          | Bulgaria, Romania, Poland  | Already implemented |           |
| Objective                                       | <p>The project targeted to eliminate barriers to deep (staged) renovation, by developing a renovation roadmap for single-family houses. The roadmap provides a customised renovation plan over a long-term period (10 to 20 years), which considers the occupants' needs and specific situations (e.g. age, financial situation, composition and expected evolution of the household, etc.) and avoids the risk of 'locking out' future renovation solutions due to a lack of foresight.</p> <p>The renovation roadmap is combined with a building logbook, a repository where all the building-related information can be stored and continuously updated. The type of information stored in the logbook and its functionalities can evolve over time and could range from energy production and consumption to equipment maintenance, as well as insurance, property plans and obligations, energy bills, smart meter data and links to available financing options for renovation projects.</p> <p>Project website is available <a href="#">here</a>.</p> |                     |           |
| Scores  | Relevancy: 3   | Replicability: 2    | Impact: 3 |
|   | Feasibility: 2   | Adaptability: 3     | Sum: 13   |
| Why is it a good practice?                      | <p>Deep energy renovation of residential flats is complex, expensive and a time consuming hurdle for most of the homeowners. Therefore, most home building renovations are implemented step-by-step over a course of several years. This adds the risk of "lock-in" -making today certain renovation choices which will limit the future renovation potential. The roadmap and logbook can effectively address and overcome this barrier.</p>  |                     |           |
| Relevancy for CEE region, replication potential | <p>In the CEE region, mostly due to lack of financial resources, the lock-in effect of inappropriate and low-quality energy renovation is a general issue, therefore the complex management of even residential buildings is required. For this, iBROAD offers a viable solution. To let it happen on a systematic level, national legislation could provide an obligation for this. Report on feasibility and replicability across Europe is available <a href="#">here</a>.</p>  |                     |           |



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| Idea  | <b>Intervention package for increasing behavioural change</b>   |                     |           |
| Project title                                   | STEP_BY_STEP - Step by step commitments for energy saving   |                     |           |
| Involved CEE countries                          | Poland  | Already implemented |           |
| Objective                                       | <p>The project overall goal is to maximize the percentage of households of a homogeneous area that adopt energy-saving behaviours. In order to do so, a methodological interventions package was developed and piloted to support massive and durable behavioural changes. It starts by door-to-door contact with households in order to propose short interviews. Households are invited to answer several questions and to try out 1 to 3 simple actions. Then, participants are solicited regularly through email or by phone and are coached over a 20-month period towards the adoption of energy-saving practices. The coaching is managed by a digital web-based system based on the behavioural strategy. Suggested actions are personalized to suit their profiles. The actions go from easy (to wash hands with cold water) to more difficult (to turn down heating temperature) and finally become challenges representing an investment decision (to purchase class A dishwasher). The actions are assembled in patterns enabling us to follow different paths to adopt new behaviours step by step. Each household takes its own path.</p> <p>More information available <a href="#">here</a>.</p> |                     |           |
| Scores  | Relevancy: 3  | Replicability: 2    | Impact: 2 |
|   | Feasibility: 2  | Adaptability: 3     | Sum: 12   |
| Why is it a good practice?                      | The reduction of energy demand due to the high energy prices in 2022-23 proved that compared to the required human and financial resources, there is an enormous potential in behaviour change.   |                     |           |
| Relevancy for CEE region, replication potential | In the CEE region, where energy prices are generally regulated and kept artificially low, it would be important that when the energy crises are over and the market prices become lower, to avoid any rebound effect, and keep the consumption of fossil fuel lower. Now the reduction of consumption happens without any systematic knowledge transfer to the consumers. The replication of this good practice could overcome this, however, its effective implementation needs engagements from the government, or alternatively, where there is an energy efficiency obligation scheme in place, by market actors.   |                     |           |



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| Idea  | <b>Assessing the socioeconomic benefits of improving energy efficiency</b>   |                     |           |
| Project title                                   | IN-BEE - Assessing the intangibles: the socioeconomic benefits of improving energy efficiency  |                     |           |
| Involved CEE countries                          | Bulgaria, Poland   | Already implemented |           |
| Objective                                       | <p>The project described and provided evidence for the many intangible benefits of improving energy efficiency through a multi-disciplinary approach, combining methods, datasets, and techniques from cutting edge research in law and economics, humanities and consumer behaviour, regulation and environmental sciences, as well as engineering. Connected to that, it had to following output:</p> <ul style="list-style-type: none"> <li>• Developed a set of indicators to measure intangible benefits of energy efficiency. Report available <a href="#">here</a>.</li> <li>• Developed Key Performance Indicators to assess the impact of energy efficiency strategies, available <a href="#">here</a>.</li> <li>• Studied relevant cases and identified best practices. Publications on case studies are <a href="#">here</a>.</li> </ul> <p>More information is available <a href="#">here</a>.</p> |                     |           |
| Scores  | Relevancy: 2   | Replicability: 3    | Impact: 2 |
|   | Feasibility: 2   | Adaptability: 2     | Sum: 11   |
| Why is it a good practice?                      | As investment on energy efficiency is often only assessed by simple payback time by saving fuel, it is important to integrate other benefits into impact assessment of such investments, and also to highlight those, more intangible positive side-effects to the general public.   |                     |           |
| Relevancy for CEE region, replication potential | This overly one-sided judgement of benefits of energy efficiency measures are very relevant in the CEE region. The integration of other side benefits can help spread energy efficiency measures. To be replicated and implemented, the engagement of multiple target groups is needed, as these benefits are relevant on national level when national programmes are developed, and also for financial institutes in order to fully assess the economic benefit of potential investments.   |                     |           |



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| Idea  | <b>Enhancing circular renovation process</b>  |                      |           |
| Project title                                   | DRIVE 0 - Driving decarbonization of the EU building stock by enhancing a consumer centered and locally based circular renovation process   |                      |           |
| Involved CEE countries                          | Estonia, Slovenia   | Under implementation |           |
| Objective                                       | <p>The overall aim is to enhance a consumer centered circular renovation process in order to make deep renovation more attractive, environmentally friendly and cost effective, by combining the need for a circular building industry with the identification of specific local drivers, supported by an anthropology based and environmentally friendly approach to make it customer-centred and respectful of local geo-material areas and implementing urban mining and material banks.</p> <p>Specifically, it applies the following 4 - step approach:</p> <ol style="list-style-type: none"> <li>1. Developing proven deep renovation products and concepts</li> <li>2. Developing attractive consumer centered business models based on circular renovation concepts supported by digitalization and gamification.</li> <li>3. Providing occupants with attractive and understandable information on building performances in use.</li> <li>4. Providing relevant stakeholders evidence of performance of the developed DRIVE 0 solutions by local study and demonstration cases initiated by 'local drivers'.</li> </ol> <p>Project website is available <a href="#">here</a>.</p> |                      |           |
| Scores  | Relevancy: 2  | Replicability: 2     | Impact: 2 |
|   | Feasibility: 2  | Adaptability: 3      | Sum: 11   |
| Why is it a good practice?                      | Local, circular economies not only contribute to mitigate emission connected to production and transportation, but also contribute to less environmental impact of mining and waste disposal. The project provides good practice on how this can happen in case of deep renovation, which lowering environmental footprint also shortens the carbon payback-time of energy retrofitting.  |                      |           |
| Relevancy for CEE region, replication potential | The lack of circularity in the economic sector is generally relevant, not only in the construction sector in the CEE region. However, replication and transposition of this project solution requires systematic changes in the national legislations.  |                      |           |



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| Idea  | <b>Energy Efficiency Performance-Tracking Platform</b>   |                      |           |
| Project title                                   | EN-TRACK - Energy Efficiency Performance-Tracking Platform for Benchmarking Savings and Investments in Buildings   |                      |           |
| Involved CEE countries                          | Bulgaria   | Under implementation |           |
| Objective                                       | <p>The goal of EN-TRACK is to create a one-stop shop platform with standardized data related to the energy efficiency performance of the public and private building stock. Enabling interoperability with most currently active databases and tools, this will lead to an unambiguous data exchange based services ecosystem with low transaction costs.</p> <p>The EN-TRACK platform will be utilizing big data analytics to support better decision-making on the right energy efficiency investments. In addition to gathering data from large public building owners, EN-TRACK enables interoperability with well-known and trusted databases and tools such as DEEP, eQuad and EnerInvest. This provides an open-source big data platform capable of acquiring and harmonizing data from multiple sources based on international standardized description of building data and energy efficiency measures.</p> <p>Project website is available <a href="#">here</a>.</p> |                      |           |
| Scores  | Relevancy: 2   | Replicability: 3     | Impact: 2 |
|   | Feasibility: 2   | Adaptability: 2      | Sum: 11   |
| Why is it a good practice?                      | <p>One of the principal challenges to increasing energy efficiency investments is the lack of statistical data on the actual energy and cost savings achieved with them. Data is still hard to access because it is decentralized and in different formats. Consequently, only a small part of this can be used to produce reliable empirical evidence on the performance of the energy efficiency investment. The developed platform will help to overcome this issue.</p>  |                      |           |
| Relevancy for CEE region, replication potential | <p>As already implemented energy efficiency measures are limited and data monitoring lacks or fragmented compared to Western-Europe, this EU-wide platform can support decisions on energy efficiency projects.</p>  |                      |           |



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| Idea  | <b>Harmonizing energy saving calculation under EED</b>   |                      |           |
| Project title                                   | streamSAVE - Streamlining Energy Savings Calculations  |                      |           |
| Involved CEE countries                          | Czechia, Lithuania, Slovenia   | Under implementation |           |
| Objective                                       | Harmonizing accurate, bottom-up energy savings calculations of technical priority actions under Article 7, as well as Article 3 of Member States' EED reporting in five Priority Actions, namely heat recovery from industry and district heating; Building automation and control Systems (BACS); Commercial and industrial refrigeration systems; Private and public electric vehicles; and Lighting systems including public lighting. For these Priority Actions, standardized calculation methodologies, indicative calculation values including guidelines on Member States' customisation, cost parameters and related CO <sub>2</sub> savings were developed. Click <a href="#">here</a> for more information. |                      |           |
| Scores:   | Relevancy: 1   | Replicability: 3     | Impact: 1 |
|   | Feasibility: 3   | Adaptability: 3      | Sum: 11   |
| Why is it a good practice?                      | Accounting better energy savings in the identified priority actions can provide important feedback to policy makers and could help to exploit additional energy saving potential of these areas.   |                      |           |
| Relevancy for CEE region, replication potential | CEE countries generally lag behind to reach national objectives on energy efficiency. Therefore, this good practice can help to reach this objective and help to implement additional energy efficiency measures in the identified priority actions, as energy efficiency potential in these priority actions are unexploited. Replication depends on the national authorities.  |                      |           |



## HEAT & POWER

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| Idea  | <b>Securing future-proof environmentally compatible bioenergy chains</b>   |                  |           |
| Project title                                   | SECURECHAIN -Securing future-proof environmentally compatible bioenergy chains - H2020   |                  |           |
| Involved CEE countries                          | Hungary  | Implemented      |           |
| Objective                                       | The measure aims, through pilot projects and clusters for learning, to promote the development and use of sustainable supply chain management for local biomass, mobilizing local biomass suppliers, energy producers and financial sector players.  |                  |           |
| Scores  | Relevancy: 3   | Replicability: 3 | Impact: 3 |
|   | Feasibility: 3   | Adaptability: 3  | Sum: 15   |
| Why is it a good practice?                      | <p>The action employs a multi-stakeholder process for the development and piloting of sustainable supply chain management models for biomass, therefore testing new paths for local bioenergy chains that fosters sustainable, environmentally compatible mobilization of biomass sources and a proactive promotion of the market through conscious investments into the bioenergy sector. If successfully implemented, this can lead to a more circular use of biomass and the decrease in available quality round wood for energy production.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | <p>Biomass supply chains in CEE countries are not following a sustainability management model entailing the lack of application of the cascading use principle and lack of added value for wood products that capture the carbon for longer periods, leading to an availability of high quality round wood for energy. New supply chain management models need to be tested and expanded to break current practices.</p>   |                  |           |



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| Idea  | <b>Promoting replacement of heating, cooling units</b>   |                      |           |
| Project title                                   | Making heating and cooling for European consumers efficient, economically resilient, clean and climate-friendly  |                      |           |
| Involved CEE countries                          | Hungary, Bulgaria  | Under implementation |           |
| Objective                                       | <p>The measure will implement replacement campaigns in ten target regions by means of action plans fortified with policy and business-related improvements. The project connects all key actors in each region – local governments, consumer associations, developers, energy utilities and professional associations – to steer the direction of a wide range of replacement activities.</p> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Scores  | Relevancy: 3   | Replicability: 3     | Impact: 2 |
|   | Feasibility: 3   | Adaptability: 3      | Sum: 14   |
| Why is it a good practice?                      | The measure unites all relevant stakeholders in target regions for improving coordination, raising awareness, using technical tools (such as a heating system calculator) to develop real momentum towards collective actions.   |                      |           |
| Relevancy for CEE region, replication potential | Lack of awareness of alternatives and coordination and lack of dialogue between consumers and other industrial or public stakeholder is one of the key bottlenecks for advancing sustainable heating and cooling alternatives. Such dedicated capacity-building measures and knowledge transfer actions are crucial for behaviour change and advancing implementation of solutions.  |                      |           |



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| Idea  | <b>Peer-to-peer Energy Communities</b>   |                      |           |
| Project title                                   | Towards a new generation of EU peer-to-peer Energy Communities facilitated by a gamified platform and empowered by user-centred energy trading mechanisms and business models  |                      |           |
| Involved CEE countries                          | -  | Under implementation |           |
| Objective                                       | Develop a platform for collecting experiences from operative peer-to-peer energy communities in Europe, providing smart demand-response mechanisms to optimize energy consumption and peak demand at the community level and for adopting community-based nudging mechanisms for peer-to-peer transactions of renewable energy and to sustain prosumer-friendly business models. |                      |           |
| Scores  | Relevancy: 3   | Replicability: 3     | Impact: 2 |
|   | Feasibility: 3   | Adaptability: 3      | Sum: 14   |
| Why is it a good practice?                      | <p>The measure entailed supporting peer-to-peer learning on financial, technical and legal benefits and viability of energy communities, leading to behavioural-based incentives for such communities.</p> <p>More information is available <a href="#">here</a>.</p>  |                      |           |
| Relevancy for CEE region, replication potential | Energy communities in the CEE region are still scarce and require support for upscaling and for improvement of technical and financial viability and such online learning tools can be easily multiplied.  |                      |           |



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| Idea  | <b>Turning unexploited food waste into biomethane supplied through local filling stations network</b>   |                  |           |
| Project title                                   | Turning unexploited food waste into biomethane supplied through local filling stations network  |                  |           |
| Involved CEE countries                          |   | Implemented      |           |
| Objective                                       | The measure entails promoting segregated collection of food waste as energy source, conversion to biogas, and its upgrading to biomethane and utilization in associated network of filling stations.  |                  |           |
| Scores:   | Relevancy: 3  | Replicability: 3 | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 2  | Sum: 14   |
| Why is it a good practice?                      | <p>Due to the availability of food waste, the very limited uptake of investments in biogas plants and the poor stakeholder knowledge of the technical options for usage through local filling stations as a biofuel.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | Biogas plants are rare in the region and it can prove a viable partial solution if used in associated networks locally and not transported for long distances.  |                  |           |



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| Idea  | <b>Supporting Consumer Co-Ownership in Renewable Energies</b>  |                  |           |
| Project title                                   | Supporting Consumer Co-Ownership in Renewable Energies   |                  |           |
| Involved CEE countries                          | Bulgaria, Czechia  | Implemented      |           |
| Objective                                       | The measure aims at engaging consumers in financing RES, thus becoming “prosumers” which in turn induces positive behavioural changes in energy consumption.   |                  |           |
| Scores  | Relevancy: 3   | Replicability: 3 | Impact: 2 |
|   | Feasibility: 2   | Adaptability: 3  | Sum: 13   |
| Why is it a good practice?                      | <p>The measure activates local authorities and consumers demonstrating the positive impact co-ownership has on consumer behaviour. It shows the ability of this democratic participation model to include women as well as low-income households, in particular unemployed, thus having the potential of a wider societal impact.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | Changes in consumer behaviour are hard to achieve in the CEE region and engaging consumers in concrete actions, such as the demonstration of RE co-ownership locally, will bring along a higher awareness and uptake of sustainable energy productions and efficient use solution.   |                  |           |



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| Idea  | <b>Sustainable supply of woody biomass from agrarian pruning and plantation removal</b>   |                  |           |
| Project title                                   | Take-off for sustainable supply of woody biomass from agrarian pruning and plantation removal   |                  |           |
| Involved CEE countries                          | Ukraine   | Implemented      |           |
| Objective                                       | Push the development of the bioenergy utilisation of agrarian pruning and plantation removal (APPR) wood obtained from vineyards, olive groves and fruit tree plantations   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 2 | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 2  | Sum: 13   |
| Why is it a good practice?                      | <p>The measure entails a comprehensive approach towards enabling the use of APPR for energy in an intense communication campaign, addressing the policy barriers and on the legal framework currently setting limits and setting up and running new APPR biomass value chains across countries, enabling entrepreneurship in the area.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | <p>The measure entails promoting the use of a type of agricultural biomass which can constitute a viable partial alternative to wood biomass from a GHG and biodiversity perspective. Such biomass types from vineyards and fruit tree plantations are also available in the CEE region.</p>  |                  |           |



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| Idea  | <b>Triggering Sustainable Biogas Energy Communities through Social Innovation</b>   |                  |           |
| Project title                                   | Triggering Sustainable Biogas Energy Communities through Social Innovation  |                  |           |
| Involved CEE countries                          | Greece  | Implemented      |           |
| Objective                                       | The measure aims to reposition Biogas from an economic bio-fuel carrier to a social good and to come up with new community concepts and to build a stronger and wider community engagement in support of biogas.  |                  |           |
| Scores:   | Relevancy: 3  | Replicability: 3 | Impact: 3 |
|   | Feasibility: 2  | Adaptability: 2  | Sum: 13   |
| Why is it a good practice?                      | <p>The measure supports communities on the ground to realise community biogas plans in coordination with all the stakeholders, slashing transaction overheads, while also bringing communities together to exchange and inspire each other on quality sustainability and impact assessment principles.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | Sustainable biogas technologies have been extremely slow and even non existing in CEE and they have to catch up with other community energy developments. Biogas has the potential of partially covering energy needs locally.  |                  |           |



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| Idea  | <b>Understanding Energy citizenship for promoting Energy citizenship contracts</b>   |                      |           |
| Project title                                   | GReen Energy Transition Actions  |                      |           |
| Involved CEE countries                          | -  | Under implementation |           |
| Objective                                       | Conduct research to develop models and frameworks that reveal factors impacting both individual and collective energy citizenship actions and developing energy citizenship contracts.   |                      |           |
| Scores:   | Relevancy: 2   | Replicability: 3     | Impact: 2 |
|   | Feasibility: 3   | Adaptability: 3      | Sum: 13   |
| Why is it a good practice?                      | <p>Understanding of the conditions and barriers for energy citizenship emergence is crucial for designing support measures. The results are utilised not only for developing energy citizenship contracts that support the transition goals within energy communities, but also for producing recommendations aimed at improving the policymaking process towards stimulating energy citizenship.</p> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Relevancy for CEE region, replication potential | <p>Understanding and supporting energy citizenship in the CEE region is crucial for the support and uptake of energy transition pathways and solutions available to citizens. Engaging citizens is a replicable and adaptable practice.</p>  |                      |           |



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| Idea  | <b>Combined heat system using renewable energy</b>   |                  |           |
| Project title                                   | Combined HEat SyStem by using Solar Energy and heaT pUmPs  |                  |           |
| Involved CEE countries                          | -  | Implemented      |           |
| Objective                                       | Design, implement and promote a reliable, efficient and profitable system able to supply heating and hot water in buildings mainly from renewable sources.   |                  |           |
| Scores  | Relevancy: 3   | Replicability: 3 | Impact: 2 |
|   | Feasibility: 1   | Adaptability: 2  | Sum: 11   |
| Why is it a good practice?                      | <p>The measure can deliver a self-contained energy transformation and delivery system relying on renewable energy collected and transformed on-site. The solutions can move us towards nearly zero-energy buildings, energy independence and enhanced grid productivity utilising renewables.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | Decentralising heating and electricity in the CEE region using integrated RE technologies is crucial for energy transition and achieving net zero. Solutions need to be tested and expanded for household communities, office buildings, public buildings and multi-family apartment buildings.  |                  |           |



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| Idea  | <b>Combined heat system using RE</b>  |                  |           |
| Project title                                   | IMPLEMENT- Improving Local Energy and climate policy through quality management and certification   |                  |           |
| Involved CEE countries                          | -   | Implemented      |           |
| Objective                                       | Setting up the necessary structures in municipalities for developing and implementing climate and energy strategy using the certification programme European Energy Award (EEA) criteria catalogue.   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 2 | Impact: 2 |
|   | Feasibility: 1  | Adaptability: 3  | Sum: 11   |
| Why is it a good practice?                      | <p>External advisors will guide and monitor the continuous progress of developing and implementing the municipality strategies. The certification will ensure that municipalities implement their climate and energy plans to high quality standards. The certification process is ongoing and ensures that municipal climate action progress.</p> <p>More information is available <a href="#">here</a>.</p> |                  |           |
| Relevancy for CEE region, replication potential | Municipalities lack knowledge, capacity and coordination for enabling local energy transition efforts. Sustained quality support is needed in CEE countries and if accompanied by a recognised EU certification process, implementation and follow-through can be more easily achieved.   |                  |           |



## FINANCING

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| Idea  | <b>One-Stop-Shop for investment in energy efficiency for the Rhodope Region</b>  |                  |           |
| Project title                                   | Rhodoshop  |                  |           |
| Involved CEE countries                          | Bulgaria   | Completed        |           |
| Objective                                       | The objective is to establish a central procurement agency on behalf of local authorities, which could commission and implement energy retrofitting projects, involving public buildings and lighting systems, in compliance with green procurement principles. The project seeks to mobilize more than 7 million EUR of additional energy efficiency investment for the regions, targeting retrofitting of at least 32 public buildings and lighting in 31 settlements. |                  |           |
| Scores:   | Relevancy: 3   | Replicability: 2 | Impact: 3 |
|   | Feasibility: 3   | Adaptability: 2  | Sum: 13   |
| Why is it a good practice?                      | Mainstreaming the criteria and processes for energy efficiency procurement in relatively remote and understaffed municipal authorities, such as those in the Rhodope mountains, is a great way to pool expertise, tools and resources, as well as raise the overall ability to mobilize funds and implement such projects.<br><br>More information is available <a href="#">here</a> .   |                  |           |
| Relevancy for CEE region, replication potential | The CEE region has many relatively remote and difficult to reach areas, such as the Rhodopes, which can benefit from such pooling of resources. The tools and methods developed in the project, such as the inventories of buildings and lighting systems, the investment pipelines for projects and the training materials could be replicated in other regions in Bulgaria and CEE, with relatively minor adaptation.  |                  |           |



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| Idea  | <b>Toolkit and mechanism for Energy Efficiency funding</b>  |                      |           |
| Project title                                   | FinEERGo-Dom  |                      |           |
| Involved CEE countries                          | Poland, Slovakia, Romania, Bulgaria   | Under implementation |           |
| Objective                                       | The project seeks to implement and refine financing schemes for energy efficiency and renewable energy as part of residential and public building stock deep renovation in 5 EU member states, using a concept developed by the Latvian Energy Efficiency Facility (LABEEF).  |                      |           |
| Scores  | Relevancy: 3  | Replicability: 2     | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 2      | Sum: 13   |
| Why is it a good practice?                      | <p>The project helps mobilize and accelerate funding via proven Energy Performance Contracting (EPC+) tools that improve not only energy savings but general living and working conditions in the buildings. The mechanism relies on a stakeholder platform that brings together different stakeholders and increases capacity for overcoming legal and financial obstacles to renovation.</p> <p>More information is available <a href="#">here</a>.</p> |                      |           |
| Relevancy for CEE region, replication potential | <p>Good stakeholder-based processes for mobilizing finance are much needed as both financial and social capital needs to be built so that CEE communities can successfully access and utilize European Green Deal energy efficiency and just energy transition-related finance. As the tool is being applied in 5 countries, this raises the adaptability and chance that it can be replicated further in the CEE region.</p>                             |                      |           |



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| Idea  | <b>Developing, piloting and standardising on-tax financing mechanism for residential energy efficiency retrofits in European cities</b>   |                  |           |
| Project title                                   | EuroPACE  |                  |           |
| Involved CEE countries                          | Poland  | Completed        |           |
| Objective                                       | The project introduced to the EU the successful American PACE scheme, which seeks to deploy private capital for up-front financing of homeowners with repayment collected by municipalities with the property tax bill.   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 2 | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 2  | Sum: 13   |
| Why is it a good practice?                      | The project seeks to mobilize private funding and offer a realistic method of households repayment with property tax and involving homeowners in a responsible capacity, together with municipalities and service contractors.<br><br>More information is available <a href="#">here</a> .  |                  |           |
| Relevancy for CEE region, replication potential | The project developers estimate that by 2025 replication could lead to 5 billion EUR mobilized investments and retrofitting of 300 000 homes, generating 45 000 jobs, if the scheme is adopted in more EU27 countries. For the CEE region, such a scheme would be relevant because households have less disposable income for up-front investments, and some are also less disciplined regarding credit instrument repayment, so they could benefit from the instituted system of on-tax repayment to the municipality. |                  |           |



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| Idea  | <b>Designing the next generation of valuation guidance for sustainability in residential property</b>  |                  |           |
| Project title                                   | ReValue – recognizing energy efficiency as a source of value   |                  |           |
| Involved CEE countries                          | -  | Completed        |           |
| Objective                                       | The project seeks to influence financing decisions in real estate, by internalizing the actual value added of energy efficiency in appraisal of residential properties.  |                  |           |
| Scores  | Relevancy: 3   | Replicability: 2 | Impact: 3 |
|   | Feasibility: 3   | Adaptability: 2  | Sum: 13   |
| Why is it a good practice?                      | <p>The inherent value of energy efficiency retrofits is often missed in real estate appraisals, and both the investment and the generated value is not internalized. By developing tools that take this into account, this corrects a market failure and generates better market signals and decisions.</p> <p>More information is available <a href="#">here</a>.</p>   |                  |           |
| Relevancy for CEE region, replication potential | <p>The CEE countries real estate markets are often less developed and appraisal is not on par with member states with a longer tradition of advanced market economies. In some CEE countries like Bulgaria home ownership is much higher, which necessitates that residential homeowners are acquainted with the value of energy efficiency and renewable energy retrofits when buying or selling their properties, so the potential benefits are even greater. With the help of key industry stakeholders, there may be good replication.</p> |                  |           |



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| Idea  | <b>Crowdfunding renewable investment projects</b>   |                  |           |
| Project title                                   | CrowdFundRES  |                  |           |
| Involved CEE countries                          | Hungary   | Completed        |           |
| Objective                                       | The project engages renewable energy developers and crowd funders, including developing crowdfunding and microfinance projects for RES development.   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 2 | Impact: 2 |
|   | Feasibility: 3  | Adaptability: 2  | Sum: 12   |
| Why is it a good practice?                      | <p>There is an investment gap between utility and larger scale RES projects and their developers and small crowdfunders and microfunders, which needs to be bridged, if private funding for RES households and communities can be mobilized.</p> <p>More information is available <a href="#">here</a>.</p>   |                  |           |
| Relevancy for CEE region, replication potential | <p>Because much less disposable income is available for RES investments in CEE households, the crowdfunding approach represents an opportunity for aggregating and capitalizing on small private funds and donations. Similar schemes could help especially vulnerable and energy poor consumers on the road to energy independence. As developers participating in such crowdfunding schemes get experience and confidence that small scale funding and crowdfunding investments pay off, replication will follow.</p> |                  |           |



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|---|--|------------------|-----------|
| Idea  | <b>On-bill project for repayment of investment to utilities</b>  |                  |           |
| Project title                                   | RenonBill  |                  |           |
| Involved CEE countries                          | Czech Republic, Belarus  | Completed        |           |
| Objective                                       | Establishing a financing mechanism for utility companies to finance building energy efficiency retrofits and accept repayment with consumer bills.   |                  |           |
| Scores  | Relevancy: 3   | Replicability: 1 | Impact: 3 |
|   | Feasibility: 3   | Adaptability: 2  | Sum: 12   |
| Why is it a good practice?                      | <p>On-bill-schemes (OBS) are novel financing mechanisms, which allows the utilities to make up-front cost investments and then collect repayment with the bills. Unlike more established RES generation ESCO schemes, utilities typically disregard pure efficiency and retrofit projects, which could be made profitable via savings.</p> <p>More information is available <a href="#">here</a>.</p>  |                  |           |
| Relevancy for CEE region, replication potential | <p>Due to the lesser disposable income in CEE states, finding appropriate schemes to fund the up-front costs by utilities is a solution with great potential. However, different CEE countries have different arrangements for their national electricity and heating utilities, e.g. the household electricity sector has still not undergone market liberalization, or special circumstances apply during the Ukraine war and energy crisis. Thus, replication will take more adaptation to the national regulation and pricing context.</p> |                  |           |



|   |   |                  |           |
|---|---|------------------|-----------|
| Idea  | <b>Utilizing innovative financial tool and attracting private investments</b>   |                  |           |
| Project title                                   | PRODESA - Energy Efficiency Project Development for South Attica  |                  |           |
| Involved CEE countries                          | Greece  | Completed        |           |
| Objective                                       | The aim was to support seven major municipalities in the Athens Metropolitan area to mobilize private investment and utilize innovative financial tools, helping to renovate 116 municipal buildings, install 3.2 MW of rooftop PV and save 45.6 GWh/y of electricity by pooling resources and project financing.   |                  |           |
| Scores  | Relevancy: 3  | Replicability: 1 | Impact: 3 |
|   | Feasibility: 3  | Adaptability: 2  | Sum: 12   |
| Why is it a good practice?                      | Major metropolitan areas are often plagued by fragmented jurisdictions and a multitude of unconnected projects and interventions, which fail to streamline and pipeline funding to the highest priority areas and outcomes. Pooling of projects and resources, streamlining approaches and crowdfunding help to boost the impact and sustainability of project results. The project did this by also linking in the Greek national Revolving Fund for Energy Efficiency and Utility ESCO Fund, which could significantly upscale the investments.<br><br>More information is available <a href="#">here</a> or <a href="#">here</a> . |                  |           |
| Relevancy for CEE region, replication potential | Such a collaborative approach is very relevant to CEE countries, who are often benefitting by different EU funding programmes (e.g. Recovery and Resilience Fund, Cohesion Fund, Just Transition Fund in coal regions) at local level without good coordination and good approaches to pool projects and resources and the efforts of adjacent metropolitan municipalities to scale up their impact.  |                  |           |