# CEESEU-DIGIT

**Central and Eastern Europe Sustainable Energy Union's Design and Implementation of regional Government Initiatives for a just energy Transition**

## D5.2 WP5 trainings report and materials

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Project acronym: LIFE21-CET-LOCAL-CEESEU-DIGIT.

# Contents

# Background of the CEESEU-DIGIT project

The Central and Eastern European Sustainable Energy Union's Design and Implementation of regional Government Initiatives for a just energy Transition (CEESEU-DIGIT) aims to build the capacity of public administrators in Central and Eastern Europe to develop Energy and Climate Action Plans (ECAPs) that not only promote increased energy efficiency, sustainable energy, reduced carbon emissions and improved climate change adaptability, helping the region to contribute towards meeting the EU's climate goals, but also plans that follow the intent of the Commission to "leave no-one behind" in the process of the just transition to energy security and the goal of a climate-neutral Europe. To ensure a clear understanding among partners, the project's Advisory Board, and the EC that an ECAP includes sufficient and well-targeted attention to the social justice components of the clean energy transition, the term ECAP+ is used in the project.

CEESEU-DIGIT's primary objective is to build capacity in 6 carbon intensive regions in 6 countries in the CEE for holistic regional ECAPs aligned with NCEP national targets supporting the Green Deal, and will involve marginalised and vulnerable groups, especially energy-poor households. A second objective is to assist municipalities to formulate, fund, and implement their ECAPs aligned with regional ones. At both levels, extensive capacity building will be extended to assist with building ECAPs.

Drawing municipalities into energy regions will help cross-pollinate ideas, share knowledge and tasks, and apply for financing. Public-sector capacity building (WP2, WP3) will help (a) formulate a holistic ECAP with energy provisions and carbon footprint reduction while improving climate-sensitive social goods - mobility, parks, playgrounds, clean air and water, biodiversity conservation; (b) address energy poverty - heating/cooling, adequate ventilation/lighting, domestic hot water, cooking; (c), attend to constituents and act on behalf of their needs; (d) understand financing options and how to apply for these; and (e) work with the private sector to mute opposition to the CET and to encourage and incorporate funding of ECAP initiatives by business (WP5). A just Clean Energy Transition (CET) needs to maximise support, minimise opposition, and overcome apathy, requiring social science/social psychology theory to be applied (WP3). Non-public sector stakeholders (key players, context setters, the crowd, and subjects) will each be targeted by specific social and conventional media outreach (WP6).

Dissemination will be (a) upward to national levels, the CoM, and the EU for use in energy transition planning (WP5, WP6); (b) across a broader CEE geography via the Central and Eastern Europeans Sustainable Energy Union (CEESEN), a recently established NGO, to have by the end-of-project 2500 members using its online

platform to share best practices, lessons learnt, and ideas that can advance the EU's climate goals (WP6).

As a result of implementing the CEESEU-DIGIT project, it is anticipated that several important longer-term impacts will be achieved, a selection among which include:

- 6 high-quality ECAP+s formulated that align GHG reduction targets with 2030 goals and address the special needs of energy-poor, elderly, and minority communities, to include people with disabilities;
- Public/private participation of 900 people in ECAP+ planning meetings to voice their concerns;
- 18 Regional Work Groups are formalised to provide ongoing input into ECAP+ implementation and a longer-term, holistic vision for a just transition;
- At least 66 public sector employees are capacitated to develop regional ECAP+s including mapping of stakeholders and collection of baseline data, and to utilise participatory governance structures to ensure involvement of all stakeholders, especially groups that are often marginalised (energy poor, ethnic minorities, migrants, elderly, people with disabilities, Roma, etc.);
- At least 200 people from civil society and vulnerable groups are capacitated to advocate on behalf of their interests in relation to energy policy/transition;
- Regional/municipal governments designate 7% of their budget to energy transition activities.

# Approach for WP 5 trainings

The majority of activities relevant for current deliverable were carried out as part of T5.1.2 Train local public sector advisors on applying for subsidies. The aim was to train at least one municipality staff member per 100,000 inhabitants in each region The vision was that this staff member(s) will then act as an advisor within the municipality for households and private sector actors seeking to apply for green transition and climate adaptation support measures.

To compile training materials for WP5 trainings, ENVIROS led the effort in bringing together relevant information. We started working on updating conventional financing lists for each of the partner countries (Submitted as D5.1). For this also the regional aspect was taken into account (for example in case of regional funding like just transition fund for some coal regions). In addition to conventional funding overview, ENVIROS team put together an overview of novel financing methods as a suitable slide set (Annex 1). They also compiled a report on *Community Energy for a Just Transition. Exploring For-Profit Approaches in European Energy Projects*. This serves as an input to raise awareness in our target regions about the community energy potential and related funding mechanisms, as EC is topic that is advocated by the Commission more as part of the Renewable Energy Directive and the Internal Electricity Market Directive implementation on local level. The report has been added to current deliverable as Annex 2. Third subject that was introduced to our target audience, was participatory budgeting, linked to the municipal climate budgets that are one of the objectives of CEESEU-DIGIT. The underlying slide set prepared by Climate Alliance has been added as Annex 3 to current deliverable, it was also used to train our consortium to be more effective in training our target audience.

## Training suggestions for the WP5 trainings

In June 2023 ENVIROS compiled an internal document with recommendations to partners on how the financing related topics could be divided into trainings and workshops. However, it was made clear that each partner should adapt the suggestions to their own situation, taking into account the regional situation as well as target group needs.

### *Grant opportunities for municipalities - energy savings and RES*

**Length**: 1-2 hours

**Form**: in person or webinar

**Objective**: to introduce participants to current subsidy opportunities for financing energy savings and RES

**Content**: presentation of the basic parameters and conditions of the relevant operational programmes and calls, (Operational Programmes, Modernisation Fund, National Programmes, National Renewal Plan...)

**Target group**: representatives of municipalities

### *Subsidy opportunities for companies - energy savings and RES*

**Duration**: 1-2 hours

**Form**: personal

**Objective**: to introduce participants to current subsidy opportunities for financing energy savings and RES in the business sector

**Content**: presentation of the basic parameters and conditions of the relevant operational programmes and calls (Operational Programmes, Modernisation Fund, National Programmes, National Renewal Plan...)

**Target group**: business sector

### *Energy savings and RES using innovative financial instruments (European City Facility and EPC)*

**Length**: 2 hours

**Form**: in person or webinar

**Objective**: to introduce the participants to the possibility of drawing subsidy support in the amount of 60 thousand EUR. To introduce the method of Energy Performance Contracting (EPC), i.e. Energy Services with Guaranteed Result - a financing method where the investment costs are covered by the contractor and the energy saving measures are paid back from the achieved savings.

**Content**: EU CF (programme conditions, call schedule, supported activities, eligible applicants, application evaluation, tips for success).

EPC - selection of EPC contractor, EPC implementation procedure, EPC service agreement

**Target group**: representatives of municipalities

### Energy poverty - what can be done locally?

**Length**: 1-2 hours

**Form**: in person or webinar

**Aim**: to introduce participants to the concept of energy poverty and what can be done locally to alleviate the problem.

**Content**: definitions, indicators, examples of measures and activities at local level

**Target group**: representatives of municipalities, LAGs, social organisations,

*Energy poverty affects a wide range of consumers, but those most at risk are the elderly, single mothers, households with one or no regular income, people in foreclosure and people in excluded localities. Municipalities and organisations at local level can get involved in the issue through outreach activities, advice, audits, subsidy programmes, etc.*

### *How to save energy at home?*

**Form**: discussion with an expert (e.g. in a library, etc.)

**Duration**: 1-2 hours

**Objective**: to help residents reduce their energy consumption, to help them with advice for more comprehensive investments

**Content**: introduction to some practical tips on how to save electricity, heat and water in the home. Information on national programmes, information on how to build a PV plant, insulate or install a heat pump.

**Target group**: public, disadvantaged public

### *How to install a solar power plant on municipal buildings and get the subsidy?*

**Duration**: 2 hours

**Form**: personal meeting

**Objective**: to explain the whole process and experience with PV projects on municipal buildings

**Content**: The project preparation and construction of PV systems consists of a number of steps. Depending on the parameters of the plant, the procedure varies. The main topics will be: Building permits - structural assessments, Fire safety solutions, Connection to the distribution network, Licensing, Conservation, Tender procedures, Grant opportunities and common mistakes or problems, Project schedule. The workshop will also aim to clarify these specifics in relation to the amendment of the Energy Act.

**Target group**: municipal representatives

### *Municipal energy planning - Local Energy Concept and Climate and Energy Action Plan (SECAP)*

**Length**: 1-1.5 hours

**Form**: in-person workshop or online

**Aim**: to provide municipalities with information on energy planning options so that they can decide whether and which plans would suit them

**Content**: what is included and how to create a Local Energy Concept (according to the MIT methodology), ECAP+ or SECAP (according to the international methodology of the Covenant of Mayors), what data a municipality needs and what subsidies it can obtain

**Target group**: municipal representatives

### *How to prepare for community energy*

**Duration**: 1-3 hours

**Form**: form, content and objective will be agreed with local initiatives to complement and develop the activities already underway.

**Objective**: To plan with wide group of local stakeholders the possible steps towards creating and launching local community energy scheme, depending on the national legal and other framework. Eventually just as a first step explaining the benefits of community energy and the way how people, businesses as well as municipalities can be involved.

**Target group**: LAG, municipal representatives, entrepreneurs, public

### *Energy management - for municipalities and/or companies*

**Length**: 30 min to 1 hour

**Form**: online workshop or 30 min at an existing meeting

**Objective**: to introduce the principles of energy management and the possibilities for its implementation (including subsidy opportunities) as a basis for municipalities/companies to decide on its implementation

**Content**: explanation of the principles of energy management, explanation of the benefits and explanation of the implementation process

**Target group**: representatives of municipalities and companies

# Implementation of the WP5 trainings

The partners carried out WP5 related trainings in their target regions as envisaged. The planned number of trained people was exceeded greatly as there was a lot of interest in different ECAP financing related information. In total more than 600 people were trained on different financing related aspects, including conventional and innovative funding, participatory budgeting, linking different funding sources together, preparing funding applications and managing (international) funding projects. In all cases the partners carrying out the training linked the training to the ECAP+ process in the region, often carrying out the training on several topics, to create better understanding about the challenges (like energy poverty, addressing heat islands or floods, improving energy efficiency) and matching financing sources/opportunities. When possible, the financing workshops and seminars were linked to other events in the region to reach larger number of stakeholders, like county energy fair or renovation days. We also joined forces with national authorities coordinating national funds suitable for ECAP implementation, where they presented as part of our events.

All trainings were carried out in local languages to avoid language barrier.

Following table gives an overview of all trainings carried out in our target region, including the number of participants and whether it was online or in person.

Table 1. WP5 workshops overview

| Country | Date | Purpose | Particip. | Location |
|---|---|---|---|---|
| Estonia | 19.10.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 30 | Jõhvi |
| Estonia | 09.01.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 62 | Sillamäe |
| Estonia | 11.01.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 50 | Kohtla-Järve |
| Estonia | 18.01.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 24 | Kiviõli |
| Estonia | 17.01.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 25 | Narva-Jõesuu |
| Estonia | 24.04.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 20 | Narva |
| Estonia | 08.01.2025 | T5.1.2 Train local public sector advisors on applying for subsidies | 15 | Narva |
| Estonia | 28.05.2025 | T5.1.2 Train local public sector advisors on applying for subsidies | 22 | Jõhvi |
| Latvia | 14.12.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 6 | online |

| | | | | |
|---|---|---|---|---|
| Poland | 09.12.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 3 | online |
| Poland | 09.12.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 12 | Warsaw |
| Poland | 25.10.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 15 | Warsaw |
| Poland | 12.12.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 193 | online |
| Czechia | 31.05.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 12 | Police nad Metují, townhall |
| Czechia | 31.05.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 8 | Broumov, monastery |
| Czechia | 15.02.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 12 | Broumov |
| Czechia | 15.02.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 9 | Broumov |
| Slovenia | 14.03.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 15 | Ptuj |
| Slovenia | 06.06.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 15 | Ptuj |
| Slovenia | 07.03.2025 | T5.1.2 Train local public sector advisors on applying for subsidies | 16 | Ptuj |
| Croatia | 30.06.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 20 | Cakovec |
| Croatia | 30.11.2023 | T5.1.2 Train local public sector advisors on applying for subsidies | 16 | Cakovec |
| Croatia | 19.06.2024 | T5.1.2 Train local public sector advisors on applying for subsidies | 25 | Cakovec |
| Croatia | 21.05.2025 | T5.1.2 Train local public sector advisors on applying for subsidies | 18 | Cakovec |
| | | **Total** | **643** | |

The feedback from the trainings was very positive. However, it is clear that especially smaller municipalities lack the capacity to apply for larger international grants as the management of those is too much. So, we are looking into pooling municipalities for some projects and also local energy agencies taking on the management coordination, to support the implementation on local level. Also, language barrier is a bottleneck when it comes to EU funds.

The trainings also served as an input for preparing sustainable financing plans for each of our ECAPs, as municipality specialists as well as other stakeholders became familiar with the different funding opportunities and were able to provide feedback about their willingness to apply for certain types of funds. The

sustainable financing plans and overview, including planned and applied projects is submitted as D5.4.

Overall, it is clear from the discussions and training feedback that conventional funds are still preferred, and local municipalities are very wary about novel funding approaches. Supportive role of energy agencies in these situations is crucial.

# Summary

Training the local municipalities and key stakeholders on how to increase the income to carry out climate and energy transition related activities is very important part of CEESEU-DIGIT project. As part of WP5, the CEESEU-DIGIT partners trained 643 people on various aspects of climate and energy funding. Special focus was put on increasing knowledge on innovative funding methods, participatory budgeting and energy communities.

# Annex 1: Innovative financing methods slide set

# Innovative Funding Mechanisms for Municipalities

April 2024, prepared by the DIGIT project

The project is financed by the European Union's LIFE programme.
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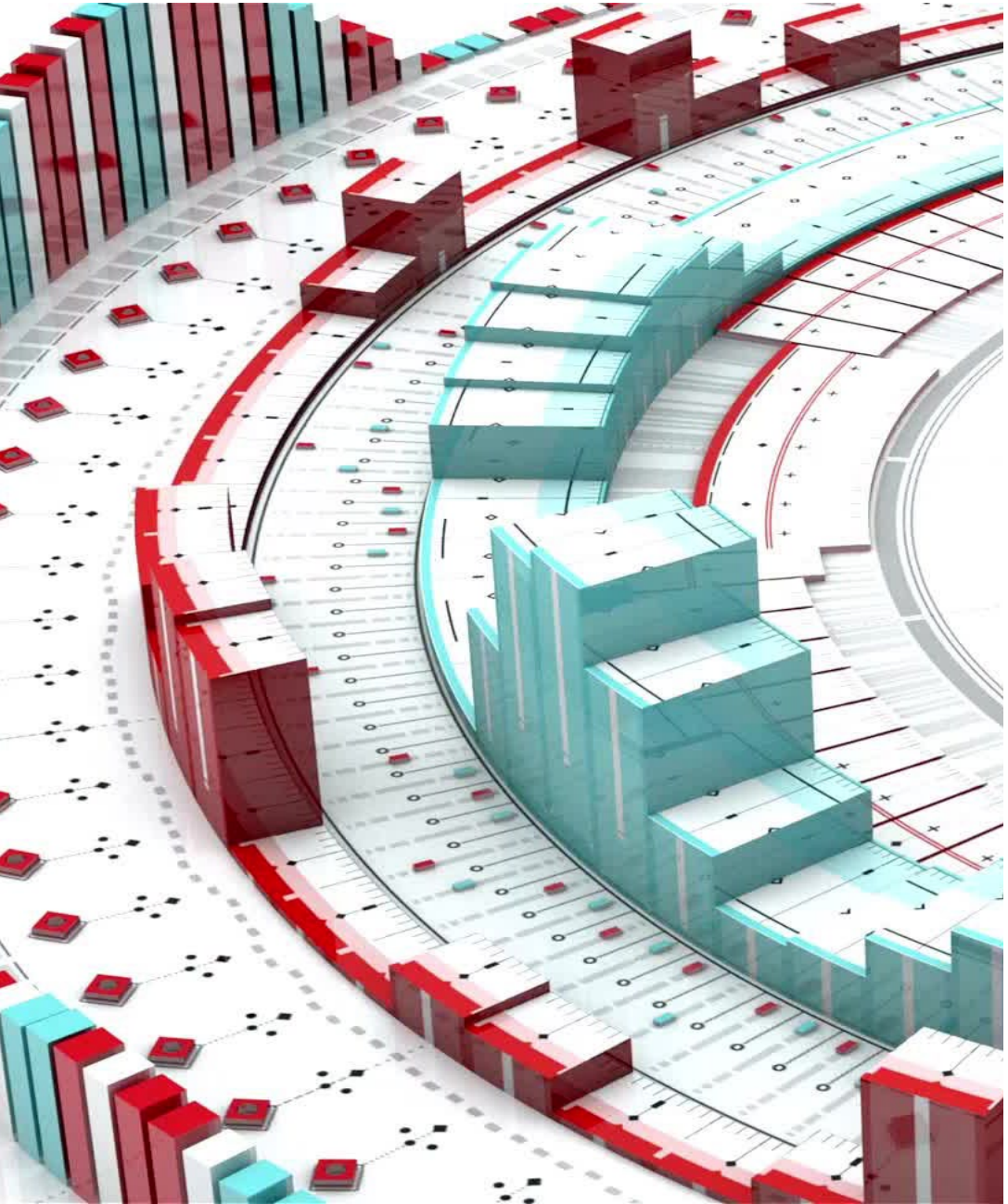


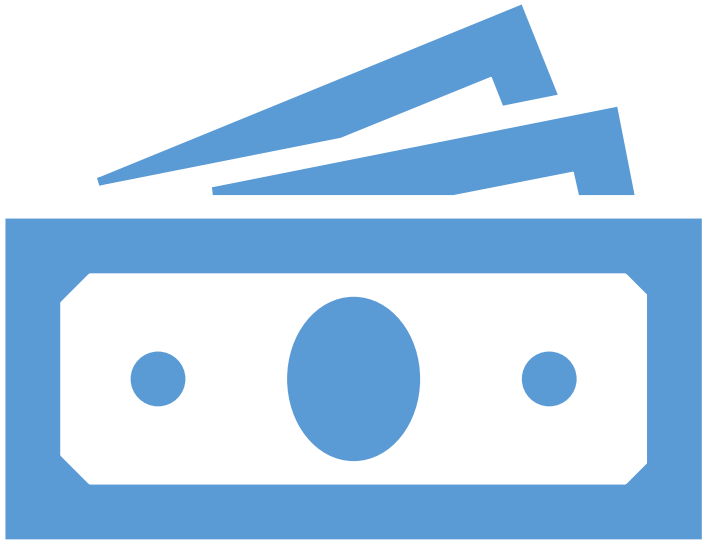
# An Overview of the CEESEU-DIGIT Project

**Project Introduction:** Launched in December 2022, financed by the EU's LIFE programme, the CEESEU-DIGIT project aims to support local and regional authorities in Central and Eastern Europe.

**Goals:** To assist in the preparation of new regional Energy and Climate Action Plans (ECAP+), aligning with National Energy and Climate Plans. Suporting the regions in finding finance for projects helping with low-carbon development and just transition.

**Regional Focus:** Targeting municipalities and regions in Croatia, Czechia, Estonia, Latvia, Poland, Slovenia, and Hungary.

**Duration:** Project set to run until spring 2025.



# Challenges in Municipal Funding

**Financial Constraints:** Municipalities often struggle with limited budgets and increasing financial demands for sustainable development projects.

**Complexity of Funding Needs:** The diverse nature of projects—from energy efficiency to large-scale renewable installations—requires multifaceted funding strategies.

**Eligibility and Accessibility**: Stringent criteria and complex application processes can restrict access.

**Competitiveness:** High demand for limited funding sources make securing financial support more competitive.

**Administrative Constraints:** Securing funding often entails time-intensive administrative process, including detailed reporting requirements. Many municipal bodies find themselves understaffed and unable to dedicate the necessary resources to manage these demands effectively.

# Conventional Sources of Funding

**Loans:** Widely used for immediate funding needs, sourced from financial institutions or governmental programs with structured repayment schedules.

**Grants:** Non-repayable financial aids, highly competitive, sourced from governments, foundations, or international organizations, usually for specific project types.

**Own Municipal Budgets:** Utilizing internally generated funds through taxes and other revenue streams, although this can limit spending flexibility.

**European programmes/projects:** Such projects can help to realize more innovative projects and support international exchange of experiences.

# European sources

**Broad Support:** The European Union offers a variety of funding mechanisms specifically designed to support municipal projects across energy efficiency, renewable energy, and sustainable development.

**Types of Funding:** This includes grants, loans which target municipal and regional projects.

**Accessibility:** EU funding is characterized by its wide reach and potential to support projects from planning through implementation, aiming to lower carbon footprints and enhance regional sustainability.

**Strategic Importance:** Leveraging EU funding aligns local projects with broader EU policy goals, such as the European Green Deal, just transition or the 2050 climate neutrality target.

# EU City facility

**Purpose:** The EU CITY Facility (EUCF) supports municipalities, local authorities, and their groupings across Europe by providing grants to develop investment concepts that facilitate sustainable energy investments.

**Grant Details:** Each beneficiary can receive a €60,000 grant to finance technical support activities like feasibility studies, stakeholder analysis, and financial structuring for energy projects.

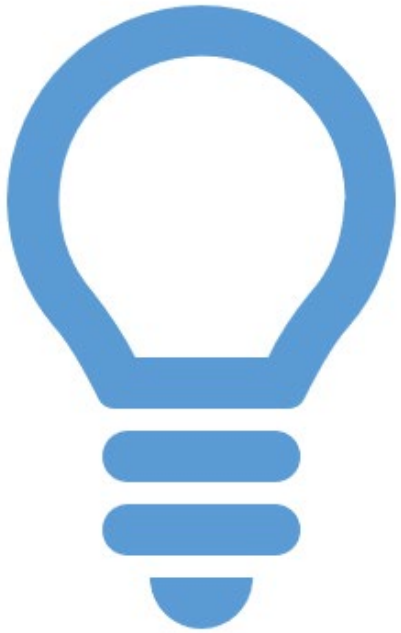
**Impact:** The EUCF aims to transform local energy and climate action plans into real investments by developing credible and mature investment concepts, which are essential for accessing further funding.

**Next call:** WINTER 2024/2025

https://www.eucityfacility.eu/home.html

EUCF
European City Facility

# Case Study - Riga's Renewable Energy Efficiency Fund



**Project Overview:** Riga applied to the EU CITY Facility with a plan to establish a Renewable and Energy Efficiency Fund (REEF) focused on the energy renovation of multi-apartment buildings.

**Goals:** The initiative aims to accelerate energy renovations to improve energy efficiency with a target of renovating 150-200 buildings annually by 2030 and 200-300 buildings annually by 2050.

**Funding Impact:** The project was bolstered by a €60,000 EU Cf grant, which facilitated the development of an investment concept.

**Outcomes:** Expected benefits include increased use of renewable energy, reduced energy poverty, and improved urban living conditions.

**Sustainability and Savings:** The city has reinvested savings from energy efficiency improvements into its Sustainable Energy and Climate Action Plan.

# Pathway to Resilience

**Objective:** Pathways2Resilience is a European project designed to support regions and communities in enhancing their resilience to climate change effects such as floods, droughts, and heatwaves.

**Support Offered:** The initiative provides financial and technical assistance, including subgrants of up to €210,000 to selected regions/communities with low adaptive capacity.

**Comprehensive Assistance:** In addition to financial support, the project offers capacity building, development of adaptation strategies, and plans to implement concrete adaptation actions.

**Engagement and Learning:** The project fosters exchange among regionson best practices and innovative solutions for climate adaptation.

https://www.pathways2resilience.eu/

# ELENA - European Local Energy Assistance

**Purpose:** Established by the European Investment Bank (EIB) and the European Commission, ELENA provides grants for technical assistance to help prepare and implement energy efficiency and renewable energy projects.

**Support Scope:** ELENA covers a range of preparatory activities such as feasibility studies, financial structuring, project management, and stakeholder engagement.

**Impact and Leverage:** ELENA projects have successfully mobilized significant investment volumes, multiplying the initial EU support by attracting additional private and public funding.

**Target Audience:** The facility primarily targets public sector bodies, including municipalities, aiming to implement sustainable energy projects.

# Horizon Europe

**Overview:** Horizon Europe is the successor to Horizon 2020, designed to drive Europe's scientific and technological research that supports EU policies for climate and energy.

**Budget and Scope:** With a budget of EUR 95.5 billion from 2021 to 2027, Horizon Europe funds a wide range of projects, dedicating at least 35% to climate-related research and innovation.

**Opportunities for Municipalities:** Municipalities can engage with Horizon Europe through partnerships and consortia to develop solutions in areas like climate change adaptation, energy efficiency, and sustainable urban mobility.

**Application Process:** Calls for proposals are structured by topics and deadlines, providing multiple opportunities throughout the year.

# Case study – Milan - Horizon Europe

**Project Overview:** Milan's Smart Urban Mobility Project, funded under Horizon Europe, aims to transform urban transport to reduce congestion and emissions while improving air quality and mobility efficiency.

**Funding Details:** The project received substantial funding from Horizon Europe, which supported the integration of innovative technologies and smart systems into the city's public transportation.

**Achievements:** Implementation of advanced traffic management systems, enhanced public transit options, and development of an app for real-time mobility services.

**Impact:** The project has led to a measurable decrease in city traffic congestion, lower emission levels, and increased usage of public transit.

Smart mobility case studies

# LIFE Programme

**Purpose:** The LIFE Programme is the EU's instrument dedicated to the environment and climate action, supporting projects contributing to environmental preservation, conservation, and sustainable development.

**Funding Details:** For the 2021-2027 period, LIFE has a budget of EUR 5.4 billion to fund projects within the EU that align with its environmental and climate objectives.

**Types of Projects:** Projects typically focus on nature conservation, water management, waste reduction, air quality improvement, renewable energy and efficient energy use.

**Beneficiaries:** Eligible entities include NGOs, research institutions, and local and regional authorities seeking to implement ambitious environmental projects.

https://cinea.ec.europa.eu/programmes/life_en

# Private and Unconventional Sources of Funding

**Overview:** Beyond traditional public funding, municipalities are increasingly turning to private and unconventional sources to finance sustainability projects.

**Types of Funding:** Includes green municipal bonds, energy performance contracting (EPC), crowdfunding, or peer-to-peer lending.

**Benefits:** These sources often provide greater flexibility, potentially lower costs, and access to broader investment communities.

**Challenges:** Navigating these funding types requires dedication of time,  understanding of financial markets, risk management, and investor expectations.

# Public-Private Partnerships (PPPs)

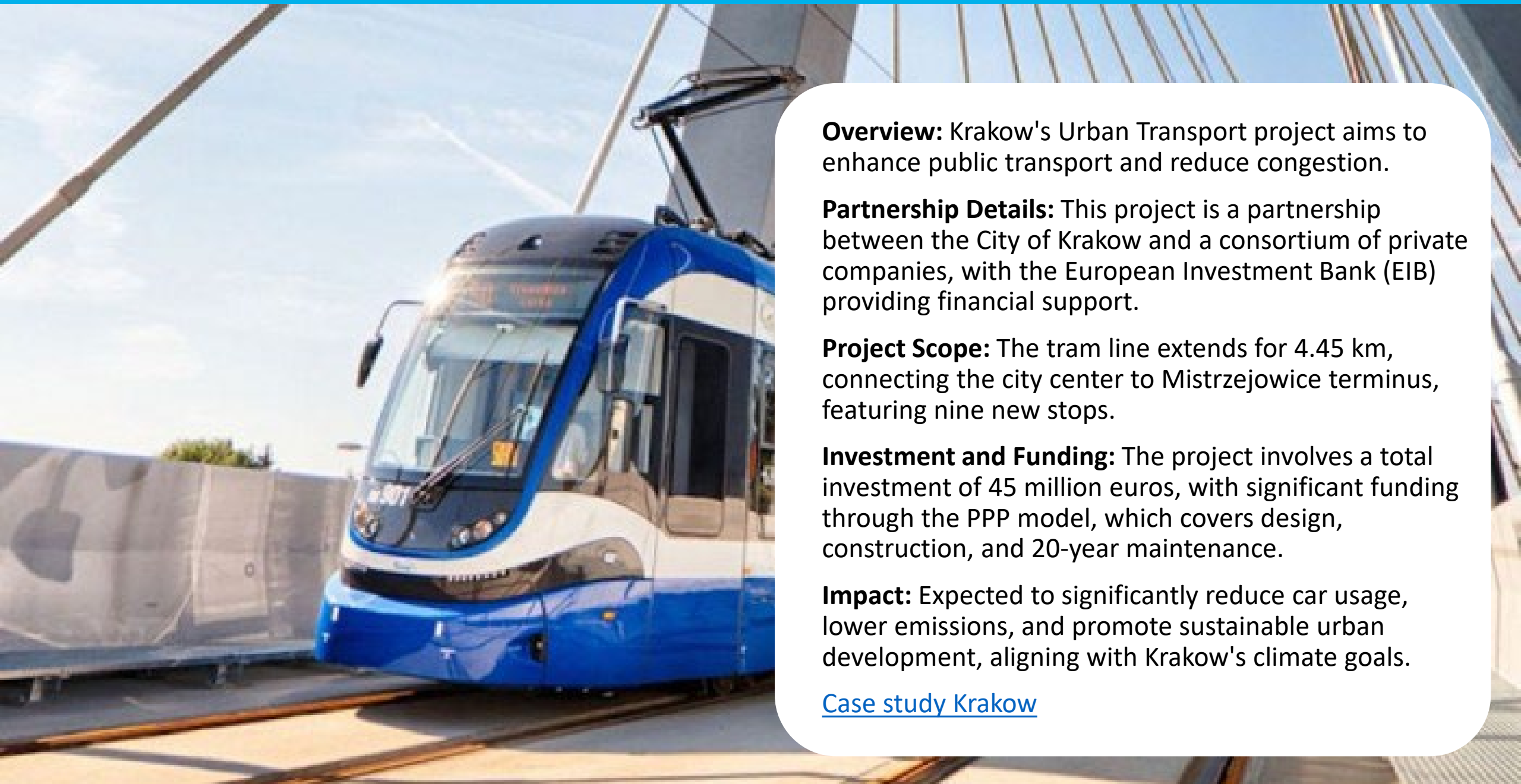
**Definition**: PPPs involve collaboration between municipal bodies and private sector entities to finance, build, and operate projects that might otherwise be unaffordable for public funds alone.

**Applications**: Common in infrastructure projects like transportation, water supply, and energy services.

**Advantages:** Access to private capital and expertise, potential cost savings, and shared risk. No need for initial capital.

**Considerations:** Long-term commitments and the need for clear agreements to align goals and ensure mutual benefits.

# Case Study - Krakow's Urban Transport PPP



**Overview:** Krakow's Urban Transport project aims to enhance public transport and reduce congestion.

**Partnership Details:** This project is a partnership between the City of Krakow and a consortium of private companies, with the European Investment Bank (EIB) providing financial support.

**Project Scope:** The tram line extends for 4.45 km, connecting the city center to Mistrzejowice terminus, featuring nine new stops.

**Investment and Funding:** The project involves a total investment of 45 million euros, with significant funding through the PPP model, which covers design, construction, and 20-year maintenance.

**Impact:** Expected to significantly reduce car usage, lower emissions, and promote sustainable urban development, aligning with Krakow's climate goals.

Case study Krakow

# Green Municipal Bonds

**Definition:** Green municipal bonds are debt securities issued by local governments or municipalities to fund projects that have positive environmental and climate benefits, such as renewable energy installations and energy efficiency upgrades.

**Benefits:** These bonds provide municipalities with access to capital markets at potentially lower borrowing costs due to investor interest in sustainable investments. They also allow investors to directly support environmentally beneficial projects.

**Transparency and Accountability:** Issuers of green bonds are typically required to report on the environmental impact of the funded projects, ensuring transparency and accountability to investors.

# Case Study: Östersund's Green Bond Initiative

**Project Background:** In 2017, Östersund, a city committed to becoming climate-neutral by 2030, issued green bonds to finance various sustainability projects, including renewable energy and energy-efficient housing.

**Funding Impact:** The funds raised have been crucial in implementing significant energy-saving measures across the city, resulting in an annual reduction of 892 MWh in energy usage due to housing improvements.

**Specific Projects:** Key investments included the development of photovoltaic, wind, and hydropower plants, as well as an innovative energy hub with battery storage.

**Community and Economic Benefits:** The projects not only advance Östersund's climate goals but also enhance local economic development and reduce energy costs for residents.

Östersund case study

# Energy Performance Contracting (EPC)

**Definition:** Energy Performance Contracting (EPC) is a financial and operational mechanism where energy savings achieved through efficiency upgrades pay for the initial investment.

**Mechanism:** An Energy Service Company (ESCO) assesses, designs, implements, and finances energy-saving projects. The cost of these projects is paid back from the energy savings over a contractually defined period.

**Benefits:** EPC reduces upfront capital expenditure for municipalities, guarantees energy savings, and transfers the performance risk to the ESCO.

**Applications:** Ideal for public buildings, street lighting, water services, and other municipal facilities where energy costs can be significantly reduced.

# Case Study - Bohnice Psychiatric Hospital Energy Savings

**Project Overview:** In 2022, Bohnice Psychiatric Hospital in Prague embarked on an energy-saving project using an EPC to renew its energy systems.

**ESCO Partnership:** The hospital partnered with an ESCO that implemented comprehensive energy-saving measures, including upgrading HVAC systems and installing energy-efficient lighting.

**Investment and Savings:** The total investment for the energy efficiency measures was €20 million, with expected energy savings of 30% annually, covering the investment cost.

**Environmental Impact:** Reduction in energy consumption contributes to lowering the hospital's carbon footprint and operational costs.

Bohnice

# ESCO Services

**Definition:** Energy Service Companies (ESCOs) provide comprehensive energy solutions including audits, project design, implementation, financing, and maintenance.

**Scope of Services:** ESCOs assess energy consumption, identify potential savings, and implement solutions to improve energy efficiency, often under a performance contracting model.

**Financial Model:** Typically, ESCOs finance the improvements themselves, with the cost being recouped from the energy savings generated, thus minimizing the risk for the client.

**Benefits:** ESCOs guarantee energy savings and operational performance, reducing financial and technical risks for clients, which are often public entities and municipalities.

# Case Study - Photovoltaics for One Crown Program

**Project Overview:** Initiated by ČEZ ESCO in the Czech Republic, this program allows municipalities and other entities to install photovoltaic (PV) systems at virtually no upfront cost.

**Program Details:** Participants pay only one Czech crown after 15 years of operation, during which the ESCO covers all service and maintenance costs.

**Impact:** This program aims to enhance renewable energy uptake by making it financially accessible, with long-term benefits including reduced energy costs and increased renewable energy use.

**Example Implementation:** In 2023, a significant PV system was installed at a public swimming pool in the city of Havířov.

ESCO case study

# Crowdfunding & Peer-to-Peer Lending

**Overview:** Crowdfunding and peer-to-peer (P2P) lending are innovative financing models where funds are raised from a large number of people, typically through online platforms, to support various projects, from small to large initiatives.

**Mechanism:** Crowdfunding involves collecting small amounts of money from many donors to finance a particular project, while P2P lending allows individuals to lend money to others directly without the intermediation of traditional financial institutions.

**Benefits:** These methods provide access to capital without the need for collateral or conventional credit requirements, often engaging the community directly in supporting local initiatives.

**Applications:** Particularly useful for innovative, community-based projects that may not qualify for traditional funding due to size, scope, or nature.

# Case Study - Križevci Solar Roofs Project

**Project Overview:** The Križevci Solar Roofs project in Croatia was financed through a crowdfunding campaign, where 93 citizens invested in two 30 kW solar power plants installed on public buildings.

**Investment Details:** The community investment demonstrated a model where public energy initiatives can be directly supported by local residents, shifting from traditional investor models to a more inclusive, community-oriented approach.

**Impact:** The project not only provides a sustainable energy source but also involves the community in the energy transition, fostering a sense of ownership and responsibility.

**Broader Implications:** Success led to the establishment of a local energy cooperative (KLIK), advising on renewable projects and leading energy transitions in partnership with the town.

Križevci case study

# Land value capture

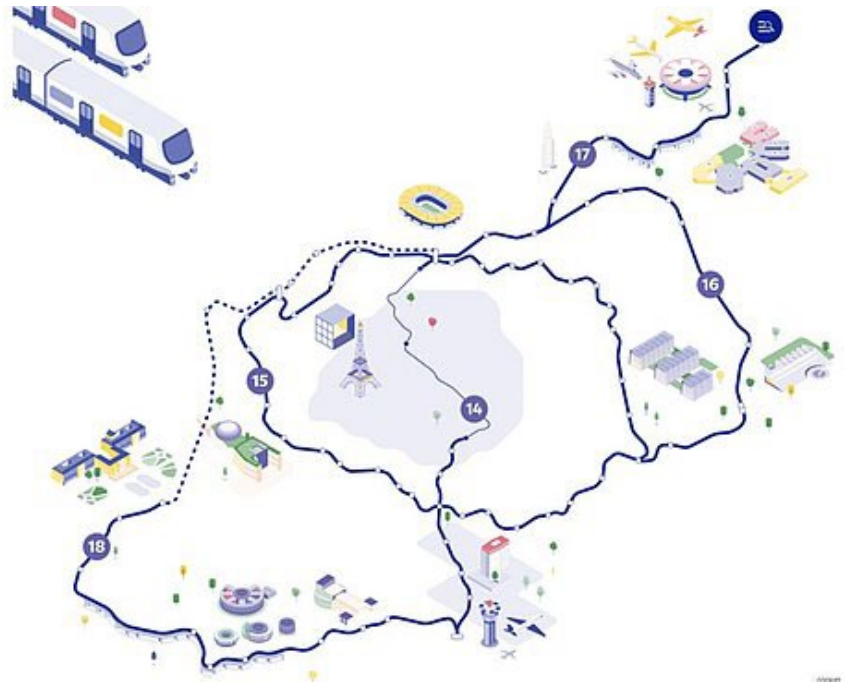
**Definition:** Land Value Capture (LVC) is a financial strategy used by public authorities to fund infrastructure projects by capturing the increase in property value that results from urban development initiatives.

**Mechanisms:** Common LVC methods include special assessments, development charges, tax increment financing (TIF), and negotiated exactions.

**Benefits:** LVC helps to ensure that those who benefit most from public investments contribute to their costs. It generates revenue for public projects without increasing general taxes, aligning the cost burden more closely with those receiving the direct benefits.

**Challenges:** Implementing LVC requires careful planning to accurately assess and forecast value increments and to design equitable payment structures.

# Case Study - Grand Paris Express Project




**Project Overview:** The Grand Paris Express, involving the construction of new metro lines around Paris, is an exemplary case of using LVC to fund large-scale public infrastructure.

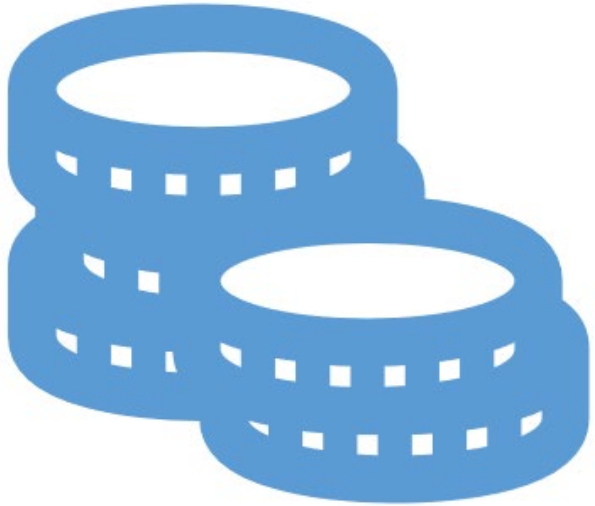
**LVC Application:** Revenue from increased land values due to enhanced accessibility is used to partially fund the project. Special tax zones and development fees have been instituted in districts where new stations are located.

**Investment Impact:** The project budget is  EUR 38.5 billion, with LVC mechanisms expected to cover a significant portion of the costs.

**Urban and Economic Growth:** The project is anticipated to boost economic development, reduce traffic congestion, and increase property values, benefiting multiple stakeholders.

Land value capture examples

# Carbon Offset Fund



**Definition:** A Carbon Offset Fund (COF) is a financial tool used by municipalities to finance local sustainability projects by capturing carbon credits. It allows entities to compensate for their carbon emissions by funding projects that reduce carbon elsewhere.

**Mechanism:** Developers or companies that cannot meet local carbon neutrality requirements contribute to the COF. The funds are then used to support various local projects aimed at reducing carbon emissions, promoting renewable energy and energy efficiency.

**Benefits:** This approach helps balance the carbon footprint of new developments and supports the municipality's broader environmental goals.

**Challenges:** Effective management of a COF requires transparent criteria for project selection and robust monitoring to ensure that contributions are effectively offsetting carbon emissions.

# Case Study - Milton Keynes Carbon Offset Fund

**Project Overview:** The Milton Keynes Carbon Offset Fund was established as part of the city's strategy to achieve carbon neutrality. It requires developers who cannot meet onsite carbon reduction targets to pay into the fund.

**Fund Use:** Payments are used to finance sustainability projects within the city, such as installing solar panels on public buildings, upgrading heating systems in social housing, and other energy efficiency initiatives.

**Impact:** The fund has successfully financed numerous projects, resulting in significant reductions in carbon emissions and enhanced energy efficiency across Milton Keynes.

**Key Achievements:** The initiative has not only helped reduce the city's carbon footprint but also promoted local economic growth and improved the sustainability of municipal infrastructure.

Milton Keynes case study

# Overcoming Challenges

**Identifying Appropriate Funding Sources:** Matching the right type of funding to specific project needs is crucial. Municipalities must thoroughly understand the benefits and constraints of each funding source.

**Capacity Building:** Municipal staff often require training to navigate complex funding mechanisms effectively. Investing in capacity building is essential for securing and managing funding successfully.

**Risk Management:** Innovative funding often introduces new risks. Municipalities need strategies to mitigate risks associated with fluctuating funding availability, project performance, and stakeholder engagement.

**Legal and Regulatory Hurdles:** Ensuring compliance with all applicable laws and regulations can be challenging, especially when implementing new funding mechanisms like green bonds or PPPs.

# Future Trends in Municipal Funding

**Increased Use of Green Financing:** As environmental sustainability becomes a higher priority, more municipalities are expected to adopt green innovative financing tools.

**Digitalization and Smart Funding:** Technological advancements will continue to influence municipal funding, with more processes moving online, including digital platforms for managing and tracking funding.

**Greater Emphasis on Social Impact:** Funding mechanisms that prioritize social equity, just transition and community benefits, such as community-based crowdfunding and impact investing, are likely to gain prominence.

**Cross-Sector Partnerships:** Collaborations between public, private, and nonprofit sectors are expected to increase, creating more integrated and comprehensive funding solutions.

# Conclusion and Moving Forward

**Harness Opportunities:**
We've explored a range of innovative mechanisms that can transform the way our municipalities finance their sustainability projects. From Green Bonds to Energy Performance Contracting, the tools help you to find the needed resources.

**Build Capacity:**
Equip your teams with the knowledge and skills needed to leverage these opportunities. Understanding and utilizing innovative funding can lead to green and just transition in your communities.

**Engage and Collaborate:**
Foster strong collaborations across sectors and within communities to pool resources, share risks, and multiply impacts. Cooperate internationally. Together, one achieve more than alone.

**Adapt and Overcome:**
Be proactive in overcoming the challenges of innovative funding. Strategic planning and risk management can transform challenges into opportunities for success.

# Join the CEESEN Network


The Central and Eastern European Sustainable Energy Network (CEESEN) is welcoming institutions and individuals committed to sustainable energy and climate action.

**Why Join?** As a member of CEESEN, you'll gain access to a community of experts and practitioners. Collaborate on projects, share knowledge, and participate in regional initiatives driving sustainable development.

**Stay Updated:** By subscribing to the CEESEN newsletter, you'll receive the latest updates on sustainable practices, upcoming events, and funding opportunities directly.

**How to Join:** Registering is simple. Visit CEESEN Registration to become part of a network that's shaping the future of energy in Central and Eastern Europe. Or just sign up to our newsletter.

# Contacts

https://ceesen.org/en/

https://www.linkedin.com/company/ceesen/

https://www.facebook.com/sustainable.municipalities

The project is financed by the European Union's LIFE programme.
Administration number: LIFE21-CET-LOCAL-CEESEU-DIGIT/101077297.
Project acronym: LIFE21-CET-LOCAL-CEESEU-DIGIT.

Co-funded by the European Union

# Annex 2: Report on Community Energy for a Just Transition. Exploring For-Profit Approaches in European Energy Projects.

CEESEU-DIGIT

# Community Energy for a Just Transition

## Exploring For-Profit Approaches in European Energy Projects

May 2024

Co-funded by the European Union

The project is financed by the European Union's LIFE programme.
Administration number: LIFE21-CET-LOCAL-CEESEU-DIGIT/101077297.
Project acronym: LIFE21-CET-LOCAL-CEESEU-DIGIT.

# About the CEESEU-DIGIT project

The DIGIT project, formally known as the Central and Eastern Europe Sustainable Energy Union's Design and Implementation of regional Government Initiatives for a just energy Transition (CEESEU-DIGIT), was launched in December 2022. It is financed by the European Union's LIFE programme and aims to support local and regional authorities in the preparation of new regional Energy and Climate Plans (ECAP+). The project focuses on six Central and Eastern European carbon-intensive target areas, specifically in the regions of Croatia, Czechia, Estonia, Latvia, Poland, Slovenia, and cooperates with a Hungarian partner.

The primary objectives of CEESEU-DIGIT are to build the capacity of local and regional authorities in all aspects covered in ECAP+, ensure alignment with the national and European Union 2050 goals related to carbon neutrality, and create a methodology that equally values climate adaptation, social, and landscape use aspects in these documents in addition to mitigation measures. This approach emphasizes a just energy transition, which involves transforming the economy and economic system in a fair and inclusive manner, ensuring respectable employment prospects for all stakeholders, and aligning with the Sustainable Development Goals (SDGs).

CEESEU-DIGIT is coordinated by the University of Tartu and involves partner organizations like Climate Alliance, ENVIROS Czech Republic, Local Energy Agency Spodnje Podravje, Mazovia Energy Agency, Medjimurje Energy Agency, Society for Sustainable Development Design, Tartu Regional Energy Agency, Vidzeme Planning Region, and WWF Hungary. The project is set to run until November 2024.

# Contents

# 1. Foreword

The concept of energy communities has evolved significantly across Europe, embodying the diversity and adaptability necessary to meet the unique energy needs of different regions. This study delves into the various forms these communities can take, from non-profit cooperatives to for-profit enterprises, each model offering unique benefits and challenges within their specific contexts.

Energy communities are not just about producing and consuming renewable energy; they are about reshaping how communities interact with their energy systems, making energy access more democratic and community-focused. These communities can operate on a local scale, directly sharing the energy they produce, or they can function through broader networks facilitated by existing energy distribution infrastructures, adhering to national regulations which vary significantly across the European Union .

The legal structures of these communities are diverse, enabling them to adapt to the specific social, economic, and legislative environments of their regions. Whether through cooperatives, partnerships, or other legal forms, these entities strive to balance profitability with social and environmental objectives, often reinvesting profits back into local development projects .

This short paper also highlights the significant impact of national legislative frameworks on the operation and effectiveness of energy communities. These frameworks can either enable or hinder the development of such communities, affecting everything from their financial viability to their operational scope. By examining various case studies from across Europe, this study provides valuable insights into how different models have succeeded or faced challenges within their legislative contexts .

As we continue to move towards more sustainable and resilient energy systems, the experiences shared in this study offer valuable lessons and inspiration. They serve not only as a testament to the innovation and community spirit driving the renewable energy sector but also as a call to action for policymakers to provide the supportive frameworks necessary for these communities to thrive.

This foreword sets the stage for a detailed exploration of energy communities, inviting readers to consider the complex interplay of factors that influence their success and sustainability. Whether you are a policymaker, an investor, or a community member interested in the potential of renewable energy, this study aims to inform and inspire your participation in the clean energy transition.

# 2. Energy communities

Energy communities represent a significant shift toward renewable energy use and embody the principles of local development and democratic energy access. Starting in the early 1990s with initiatives such as Ecopower in Belgium, these communities have become vital in democratizing energy systems, enabling collective ownership, and management of energy resources. Recognized formally in EU policy frameworks since 2019, they mark a step towards energy decentralization and community resilience.

Historically, energy communities have evolved from grassroots movements to recognized entities that adhere to structured policies and regulations. They promote the adoption of local renewable resources, including solar, wind, and hydro, enhancing the community's sustainability and reducing environmental footprints. Beyond environmental impact, these communities strengthen social bonds and foster significant local economic benefits. By channeling investments into local energy projects, they not only create jobs but also retain economic benefits within the community, enhancing local economic resilience.

From their beginnings as grassroots movements, energy communities have evolved into structured entities that harness local renewable resources such as solar, wind, and hydro. This shift not only enhances community sustainability but also aligns with broader environmental goals. The benefits of participating in energy communities are manifold and can be categorized as follows:

**Environmental Impact:**

Reduction in carbon footprint through the use of renewable energy sources.

Contribution to the sustainability of local and broader regional ecosystems.

**Social Cohesion:**

Strengthening of community bonds by fostering a collective identity focused on sustainability.

Enhancement of local governance through active participation in energy-related decisions.

**Economic Benefits:**

Stimulation of local economies via investment in renewable energy projects.

Creation of job opportunities within the community.

Retention of economic benefits within the community, enhancing economic resilience.

The operational models of energy communities vary, ranging from small-scale, localized setups that focus on internal energy sharing to more expansive projects that utilize national grid infrastructures for wider energy distribution. This adaptability allows them to meet specific regional needs and comply with existing regulatory frameworks.

In essence, energy communities not only facilitate the transition to sustainable energy but also empower local populations, reduce external energy dependencies, and support economic stability. Their continued expansion is crucial for a resilient and sustainable energy future across Europe, making them an integral component of regional sustainability strategies.

# 3. How can a citizen participate in the profit of energy community initiatives?

## 3.1. EU legislation makes it easier

The "Clean energy for all Europeans" package, ratified in 2019, marked a significant advancement by integrating the notion of energy communities into EU law, specifically through the frameworks of citizen energy communities and renewable energy communities. The Directive on common rules for the internal electricity market (EU/2019/944) plays a pivotal role in promoting the establishment of energy communities. It lays down new regulations that support active consumer involvement, either individually or through citizen energy communities. These regulations enable community members to generate, consume, share, or sell electricity, as well as provide flexibility services like demand-response and energy storage.

Moreover, the revised Renewable Energy Directive (2018/2001/EU) amplifies the influence of renewables self-consumers and renewable energy communities. It compels EU member states to support these entities via appropriate schemes, ensuring that energy communities can compete on an equal footing with larger market players.

Despite the availability of legislative support, numerous civic initiatives and projects around shared energy resources continue to emerge independently. These efforts are further elaborated in the subsequent subsections, detailing the various individual options and their impacts.

Individual options are described in more detail in the following subsections.

## 3.2. Establishing an energy community or joining an existing one

A local energy community can be formed to help the installation of energy production facilities and distribute the generated energy among its members. Initiating an energy community can be undertaken by any individual or group who has access to sufficient capital to fund the intended project. This includes existing owners of energy production plants who are interested in sharing energy within their local area.

Energy sharing within a community often occurs directly at the site of production. A common example is the installation of photovoltaic panels on the roof of an apartment building, with the generated electricity shared among the building's residents. Another model involves the principle of an "active customer," who produces energy on one property and uses the energy transmission network to use this energy on other owned properties.

Energy communities also enable members who do not own energy production facilities to benefit from shared energy resources. For legal and operational purposes, an energy community must be formally organized as a legal entity, which can take various forms such as an association, cooperative, or corporation.

Details on the different legal forms and organizational structures of energy communities, along with selected examples from various European countries, are presented in Chapter 4: Case Studies of Community Energy.

## 3.3. Investing in new projects of third parties

When considering investment in energy projects, it's crucial to select an option that aligns with your personal goals and needs. Different types of investment offer varied benefits, whether you are looking to generate a return, acquire partial ownership, or simply contribute to the development of a green project. The list below outlines several ways to get involved, ranging from providing a loan to participating in collective projects, or even supporting a project altruistically. This approach ensures that the goals of the investors match the appropriate form of participation.

**Types of Participation:**

**Loa**n: This involves lending money to a project, which commits to repay your investment along with interest over a specified period. The repayment terms and interest rates can vary significantly from one project to another.

**Bond:** Similar to a loan, this option also involves lending money to a project. However, the repayment is often structured differently, with interest payments made regularly, and the principal amount either repaid over time or in a lump sum at the end of the term.

**Equity:** An equity investment gives you ownership in a portion of the project, making you a co-owner and aligning your financial returns with the success of the project.

**Cooperative:** Joining a cooperative involves becoming a member of a company that is jointly owned by all members. Cooperatives often offer investment opportunities through equity or other financial instruments, providing benefits and returns to its members.

**Donation-based Crowdfunding:** This type of investment involves donating money to support a project without expecting any financial or material return, purely for the satisfaction of aiding development.

**Reward-based Crowdfunding**: In this arrangement, contributors provide funding in exchange for non-monetary rewards, such as products, services, or other forms of recognition.

**Generation-based Crowdfunding:** A unique form of reward-based crowdfunding where your investment is rewarded with the generation of electricity, or a discount on electricity rates, essentially receiving energy as the return on your investment.

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## 3.4. Legal forms of energy communities

The legal form of an energy community significantly influences its internal management, external relationships, and the rights and obligations of its members. The chosen structure should support openness and voluntary membership, prioritize objectives beyond mere profit-making, and allow effective control by small businesses, individuals, and local self-governing units within a civic energy community.

**Possible Organizational Forms and Legal Structures:**

**Energy Cooperatives**: These are the most common and rapidly growing types of energy communities, particularly prevalent in regions with advanced renewable energy and community energy sectors. This model primarily benefits its members and operates on cooperative principles.

**Limited Partnerships:** This form allows participants to share responsibilities and profits derived from community energy engagements. Governance in limited partnerships typically correlates with the value of each partner's share, which may not always adhere to the 'one member, one vote' principle.

**Community Trusts and Foundations:** These are oriented towards generating social value and fostering local development, utilizing profits for community benefits rather than individual gains. They are suitable for projects intended to serve the public good, especially in situations where citizens may not have the means to invest directly.

**Housing Associations:** As non-profit entities, these associations can provide energy benefits to tenants in social housing, although direct involvement in decision-making may be limited. They are particularly effective in tackling issues related to energy poverty.

**Non-profit Customer-owned Enterprises:** These organizations are often used by communities managing independent grid networks, ideal for district heating networks, a common setup in countries like Denmark.

**Public-private Partnerships:** These allow local authorities to collaborate with citizen groups and businesses to ensure energy provision and derive additional community benefits, blending public oversight with private sector efficiency.

**Public Utility Companies:** Operated by municipalities, these companies manage utilities on behalf of the taxpayers and citizens, making them a good fit for rural or isolated areas where community involvement is essential for sustainable energy development.

# 4. Case studies of community-led energy models

## 4.1. Civil wind parks (Czech Republic)

The inaugural project of its kind in the Czech Republic was Větrný park Drahany a.s., established in 2006. Civil wind parks have enabled even small shareholders from the local area, including individuals and municipalities, to invest in renewable energy installations.

The construction of these citizen wind parks was initially undertaken by Eldaco, a company that is now a part of the Portiva group. Investment in these projects began with the acquisition of so-called Priority shares for a nominal fee of 1 CZK (approximately €0.040). These shares granted investors the right to purchase actual shares once the project received a building permit and construction commenced. The cost of the shares varied depending on the specific project, with dividends paid annually, providing local citizens with a share of the profits from the power plants operating in their vicinity.

Two wind turbines were constructed under this model, each established as a separate joint-stock company with minority ownership held by local citizens and the municipality:

Větrný park Drahany a.s.: This 1.8 MW project was completed in 2006 with a total investment of CZK 1,560 million (approx. €54,740,000), of which local citizens contributed CZK 78 million (€2,740,000).

Občanský větrný park a.s.: Completed in 2014, this 3.0 MW project involved a total investment of CZK 240 million (approx. €8,420,000), with citizen contributions amounting to CZK 12 million (€420,000).

Portiva was formally established in June 2018, including all activities and assets of its majority shareholder, Ms. Iva Šťastná, who originally founded Eldaco in 1995. The company's mission was to create a distinctly Czech enterprise focused on designing, implementing, and operating wind power plants, and it expanded its portfolio to include photovoltaics after fifteen years. Today, Portiva manages a combination of 14 wind and solar energy sources with a total capacity of 30 MW, including 17 MW from wind and 13 MW from solar.

For further details, visit: https://www.eldaco.cz/

## 4.2. Coopérnico (Portugal)

In 2013, Coopérnico became Portugal's first renewable energy cooperative, founded by 16 individuals committed to fostering a fairer, more democratic, and sustainable energy sector. This cooperative pioneered cooperative clean energy production in Portugal, introduced non-profit electricity commercialization, and implemented democratic management practices within a social enterprise in the energy sector. A decade later, Coopérnico remains the only social company in Portugal that not only produces renewable energy but also redistributes its profits back to the citizens who invest in it.

Coopérnico was established to unite citizens and organizations eager to be proactive in supporting an energy and social model rooted in sustainability principles. Membership is accessible by purchasing a minimum of three shares of capital stock, each valued at EUR 60. These shares are non-dividend-bearing unless there is a surplus distribution from the cooperative's activities.

Timeline of Key Events:

2013: Establishment of the cooperative.

2014: Initiation of local groups; as of 2024, active groups include Coimbra, Algarve, Aveiro, Porto, Almada, Sintra, Portalegre, Viseu, Évora, and Leiria.

2014: First cooperative investment.

2018: Creation of the Commercialization Task Force and Capital Enhancement Call.

2020: Coopérnico becomes an electricity supplier.

2022: Launch of Surplus Purchase Service for members at an indexed price.

2023: First cooperative investment in collective self-consumption.

Offered Services:

Participation: Join Coopérnico to collaborate with thousands of citizens who are committed to developing a more equitable, democratic, and renewable energy model.

Contracting: Switch your electricity provider to Coopérnico, the only nationwide non-profit energy company, and take ownership of your energy provider.

Investment: Cooperators can make their savings grow through collective investments in renewable energy, contributing to the democratization of investment in this sector. The Coopérnico model enables non-profit entities, citizens, and companies to produce their own renewable energy without a large initial investment.

Currently, Coopérnico has 4,932 members and supplies energy to 4,632 delivery points under supply contracts, with a total investment amounting to €2,182,750.

For more information, visit: https://www.coopernico.org/

## 4.3. BürgerEnergieGenossenschaft Wolfhagen eG (Germany)

Wolfhagen, a town in the Kassel District of Hesse, made a bold decision to source 100% of its electricity from renewable sources by 2015. This transition was part of a comprehensive renewable energy (RE) strategy that not only curbed the town's reliance on fossil fuels and external energy suppliers but also retained revenues locally, benefiting the residents directly and creating numerous jobs.

A significant moment in Wolfhagen's energy transition occurred in 2003 when the town council voted to repurchase the electricity grid, leading to its "remunicipalization" by the municipally owned utility, Stadtwerke Wolfhagen. This move was part of a broader participatory process initiated by the municipal administration, involving stakeholders from the local forestry industry, businesses, and conservation groups.

In 2012, aligning with a commitment to ensure that citizens directly benefit from renewable energy investments, the BürgerEnergieGenossenschaft Wolfhagen (BEG) was established. Wolfhagen's RE strategy includes several projects including Windpark Rödeser Berg and Solarpark Gasterfeld, as well as a biomass and biogas plant operated by local farmers, alongside numerous private household production systems.

Stadtwerke Wolfhagen's customers have transitioned from mere consumers to co-owners, co-creators, and co-earners of energy. Membership in BEG is open to all Stadtwerke energy customers and their household members, empowering them to contribute to climate protection and share in the economic success of local energy initiatives. Currently, BEG holds a 36.69% stake in Stadtwerke Wolfhagen GmbH, actively participating in its governance and project implementation.

BEG's operations significantly enhance the local energy transition by reinvesting profits back into the community. Dividends are distributed to members, and additional funds are allocated to an energy-saving fund managed by the cooperative. This fund supports various initiatives aimed at increasing energy efficiency among members, enabling them to reduce their energy needs, save money, and mitigate environmental impact.

The cooperative's business activities are governed by its statutes, focusing on sustainable energy supply through participation in Stadtwerke Wolfhagen and supporting measures that enhance energy efficiency and savings. Membership allows each Stadtwerke customer to acquire up to 40 shares at €500 each, with the board of directors limiting the number of shares per member to 5 since April 2016.

Membership Advantages:

- Earn dividends from your investment in local renewable energy projects.
- Receive financial returns on your electricity consumption and production.
- Contribute to a sustainable alternative to conventional power corporations.
- Strengthen local utilities and foster regional economic and energy independence.
- Participate actively in shaping the regional energy transition.

For more information see: http://www.beg-wolfhagen.de/

## 4.4. Energetické družstvo Hnutí DUHA (Czech Republic)

Energetické družstvo Hnutí DUHA is a cooperative in the Czech Republic focused on the joint operation and development of renewable energy sources. It aims to meet the energy needs of its members, promote sustainable practices, and educate the community on the benefits of renewable energy. The cooperative's activities include producing and sharing electricity among its members.

The cooperative was founded in December 2023, with a governance structure that emphasizes equality and participation. The minimum investment required for membership is CZK 5,000 (€200), although members can choose to invest up to CZK 1 million. Regardless of investment size, each member has an equal vote in cooperative decisions. This democratic approach is foundational to the cooperative's operations, which plan to expand gradually as new projects are initiated.

Core Principles of the Cooperative:

Openness and active participation

Conservation and respect for the natural environment

Ethical investment in modern energy solutions

**Initial Projects and Financial Strategy:**

The first major initiative is the installation of a 50 kW photovoltaic system at the Bio Farm in Velké Hostěrádky, with estimated costs of CZK 1.5 million (approximately €60,000). The project will generate revenue by selling electricity back to the farm, with approximately 32% of the produced electricity expected to be consumed onsite, and any surplus distributed among the members. This distribution model aligns with new Czech legislation set to take effect in July 2024.

Profits are distributed annually to members. Given the potential fluctuations in profitability, especially with anticipated decreases in electricity prices, the cooperative plans to diversify its investments. Future focus areas may include wind power, biomass cogeneration, and energy storage solutions, as well as offering consultancy services to develop other energy community models.

Future Directions and Member Engagement:

The success of Energetické družstvo Hnutí DUHA will heavily rely on its members' active involvement in identifying and developing economically viable and sustainable energy projects. This participatory approach not only enhances project outcomes but also ensures that the cooperative remains aligned with the interests and needs of its community.

For more information see: https://druzstvo.hnutiduha.cz/

## 4.5. SonnenCommunity (Germany)

SonnenCommunity is a distinct segment of customers from Sonnen, a leading manufacturer and supplier of home batteries and photovoltaic power systems. Established as the largest independent and sustainable energy community, SonnenCommunity embodies a future-oriented approach to energy consumption and production.

Since the first Sonnen batteries were produced in 2010, the company has been at the forefront of the energy sector, creating systems that allow households to store and utilize their self-generated solar energy both day and night. Sonnen has expanded globally, with operations in Germany, Italy, Great Britain, the United States, and Australia, promoting a vision to overhaul traditional energy systems with clean, reliable, and economical solutions.

What started with a battery designed to maximize the use of excess solar generation has evolved into a comprehensive ecosystem for energy generation, storage, and distribution, addressing complex contemporary energy and environmental challenges.

Community and Energy Sharing:

SonnenCommunity consists of Sonnen customers who produce their own electricity from renewable sources. This community facilitates the sharing of excess electricity; surplus power generated by one member can be consumed by another. This model not only includes homeowners but also includes farmers and other individuals who manage various renewable energy sources.

All surplus energy generated by SonnenCommunity members can offset their annual electricity consumption from the grid, essentially allowing them to operate independently from traditional power suppliers. SonnenCommunity operates under the SonnenFlat tariff, where members who contribute their solar power systems to network services receive rewards, potentially reducing their energy bills to zero.

As members increase their photovoltaic capacity, they contribute more power to the grid. In response, Sonnen increases the allocation of free grid electricity to these members, enhancing their benefits. This innovative model supports the broader electricity network by providing additional stability without imposing higher costs on the community.

Sonnen acts as a flexibility aggregator, engaging end-users directly in the electricity market through innovative support services. This approach benefits not only individual Sonnen customers but also strengthens the overall transmission system and supports conventional energy consumers by stabilizing the local network at no extra cost.

Sonnen's business model, where the investment in energy infrastructure like batteries and photovoltaics is borne by the customers, exemplifies a shift towards sustainable and customer-empowered energy solutions.

For more information see: https://sonnengroup.com/sonnencommunity/

## 4.6. Crowd investing for solar roofs in Križevci (Croatia)

Crowd investing for renewable energy has gained significant traction in recent years, supported by numerous platforms that manage project logistics and investor communication. This model has proven particularly appealing to small municipalities seeking attractive returns on investment, aided by the decreasing costs of technology.

In 2018, the municipality of Križevci embarked on Croatia's first pilot project for citizen crowd investing in renewable energy. The project aimed to install a solar panel (PV) power plant atop the administrative building of the municipality's Development Center and Technology Park. This initiative was spearheaded by the Green Energy Cooperative ZEZ, in collaboration with local and regional partners including the municipality of Križevci, Regional Energy Agency North, Greenpeace Croatia, Solvis, and the ACT Group.

The funding phase of the power plant began with a fundraising campaign that engaged 53 investors, each contributing an average of €500, collectively raising a total of €31,000 for a 30 kW PV plant. Remarkably, the campaign secured the necessary funds within just 10 days. A follow-up campaign was initiated for a second PV plant, which has a production capacity of 33,000 kWh/a. This second campaign quickly confirmed the sustained interest of citizens, reaching its €23,000 target budget in only 48 hours and ultimately raising four times the initial target.

The primary goal of this project was to demonstrate the feasibility of using local resources to finance public energy initiatives and to illustrate that community investment can rival corporate investment in such projects. The success of the project lead to the formation of a local energy cooperative, KLIK, which now provides guidance on renewable energy projects and leads the energy transition in partnership with the town.

For more information see: https://energy-cities.eu/best-practice/crowd-investing-for-solar-roofs-in-krizevci

# 5. Conclusions

Throughout this analysis of community energy models, it has become clear that these entities serve a dual purpose: they are catalysts for the transition to sustainable energy, while also pioneering new economic models that can significantly impact local economies. The case studies from different countries illustrate this transformative potential effectively.

In Germany, the BürgerEnergieGenossenschaft Wolfhagen showcases how a citizen-based cooperative can effectively influence local energy policies while ensuring economic benefits for its members . Across in Czechia, the Energetické družstvo Hnutí DUHA illustrates the power of community involvement in renewable energy through their planned projects like the 50 kW Photovoltaic System at Velké Hostěrádky, which integrates community investment with sustainable energy production . Further north, the Vindelkraft cooperative in Sweden exemplifies how harnessing local natural resources, such as wind, can sustain a community's energy needs and stimulate economic growth .

These examples highlight the viable potential for energy communities to function as for-profit entities that complement their communal objectives. This blending of profit motives with community-oriented goals introduces a sustainable model where financial viability supports ecological sustainability.

Moreover, the adaptability and scalability of these models in different European settings suggest a robust framework for replication. However, the proliferation of such energy community systems requires supportive regulatory environments that recognize and promote their economic and ecological benefits.

Therefore, it is advisable for policymakers and stakeholders to implement clear measures that foster the growth of both non-profit and for-profit community energy initiatives. This strategy will not only hasten the shift towards renewable energy but also ensure that this transition supports economic prosperity and social equity.

In conclusion, community energy models, especially those allowing for-profit engagements, offer a promising route towards achieving energy democracy. By nurturing ecosystems where communities can thrive both economically and sustainably, we edge closer to a comprehensive model of energy development that is beneficial for all stakeholders involved.

**Further Reading**

To expand our understanding and provide additional perspectives on the subject of energy communities, especially in the context of Central and Eastern Europe, we recommend the following resources. These readings offer valuable insights into the practices, challenges, and advancements in community energy initiatives across various European regions.

**Energy Communities in CEE** - An extensive overview of energy communities in Central and Eastern Europe, focusing on their development, impact, and future potential. Read more

**Energy Communities: A Brief Explainer for Managing Authorities in Central and Eastern Europe** - This publication provides a concise explanation aimed at helping local

authorities understand and support the development of energy communities. Read more

**Energy Communities Repository** - The European Commission's repository offers a wealth of information on energy communities, including detailed case studies and general information relevant to stakeholders and policymakers. Read more

**Community Energy Practice: 7 Recommendations for 7 EU Countries** - A study by Frank Bold that discusses the practical aspects of community energy in Europe and provides seven targeted recommendations for enhancing policy frameworks. Read more

**Community Energy Hub** - Hosted by Energy Cities, this hub is dedicated to sharing knowledge, strategies, and success stories about community energy projects across Europe. Read more

# 6. Sources


1) An official website of the Ministry of the Environment of the Czech Republic https://www.mzp.cz/cz/komunitni_energetika

2) An official website of the European Union - https://energy.ec.europa.eu/ https://energy.ec.europa.eu/topics/markets-and-consumers/energy-communities_en

3) An official website of the European Union - https://energy.ec.europa.eu/ https://rural-energy-community-hub.ec.europa.eu/energy-communities/organisational-form-and-legal-structure_en

4) An official website of Repsol (A global multi-energy company) - https://www.repsol.com/

5) An official website of Citizenergy - https://citizenergy.eu

6) Website of KB - https://spolecne-udrzitelne.cz/

7) An official website of Coopérnico - https://www.coopernico.org/

8) An official website of BEG Wolfhagen - http://www.beg-wolfhagen.de

9) An official website Energetické Družstvo Hnutí Duha - https://druzstvo.hnutiduha.cz

10) An official website of sonnen group https://sonnengroup.com/

11) An official website of the European learning community for future-proof cities https://energy-cities.eu/best-practice/crowd-investing-for-solar-roofs-in-krizevci/

12) An official website of REScoop.eu https://www.rescoop.eu/news-and-events/news/the-social-impact-of-energy-communities-ten-benefits-they-bring

13) An official website of Eldaco company https://www.eldaco.cz/

14) Other sites with details about Civil wind farms:

- https://vpdrahany.webnode.cz/ekonomika/ https://obcanskyvetrnypark.webnode.cz/ekonomika/
- https://spolecne-udrzitelne.cz/z-praxe/vetrny-park-drahany-as--elektrarna-vlastnena-obcany
- https://www.geocaching.com/geocache/GC5FWTW_vetrna-elektrarna-vitezna

# About the CEESEN network

CEESEN, The Central and Eastern European Sustainable Energy Network, is a pivotal NGO that plays a crucial role in guiding sustainable energy and climate action in the Central and Eastern European (CEE) region. Its primary aim is to align the region's sustainable energy efforts with the European Union's 2050 climate neutrality goals. CEESEN operates by fostering cooperation and interaction among local public administrators, stakeholders, and policymakers. This ensures that policies and initiatives undertaken by the EU and other entities adequately address the interests of the CEE region, effectively planning, financing, implementing, and maintaining sustainable and just energy initiatives.

The organization is deeply committed to promoting sustainable energy practices across the CEE region. CEESEN acts as a hub for sustainable energy information, sharing knowledge and best practices, and encouraging regional cooperation. It works towards creating a low-emission, energy-efficient future, while also focusing on the social aspects of the energy transition, especially the implications for vulnerable and marginalized groups.

CEESEN's activities include supporting the development and implementation of local and regional sustainable energy and climate policies, promoting renewable energy sources and energy efficiency, and engaging in various projects and initiatives that contribute to the region's sustainable energy landscape. One of their significant roles is to ensure that the CEE region's voice is heard in wider European discussions about energy policy and climate action, thereby ensuring that the region's unique challenges and opportunities are considered in broader EU policies.

**CEESEN partners devotedly work together to build up the CEESEN network, to enable increased communication and collaboration between CEE sustainable energy actors throughout the region.**

# Annex 3: Participatory Budgets slide set

# Participatory Budgets
## Workshop

CEESEU Steering Committee, Narva
21-05-2024

Max Beijneveld
Climate Alliance

# T.5.2.3 (Climate Alliance)

**Partners will train public officials** on concepts of participatory budgeting and will encourage them to incorporate such approaches into funding decisions.

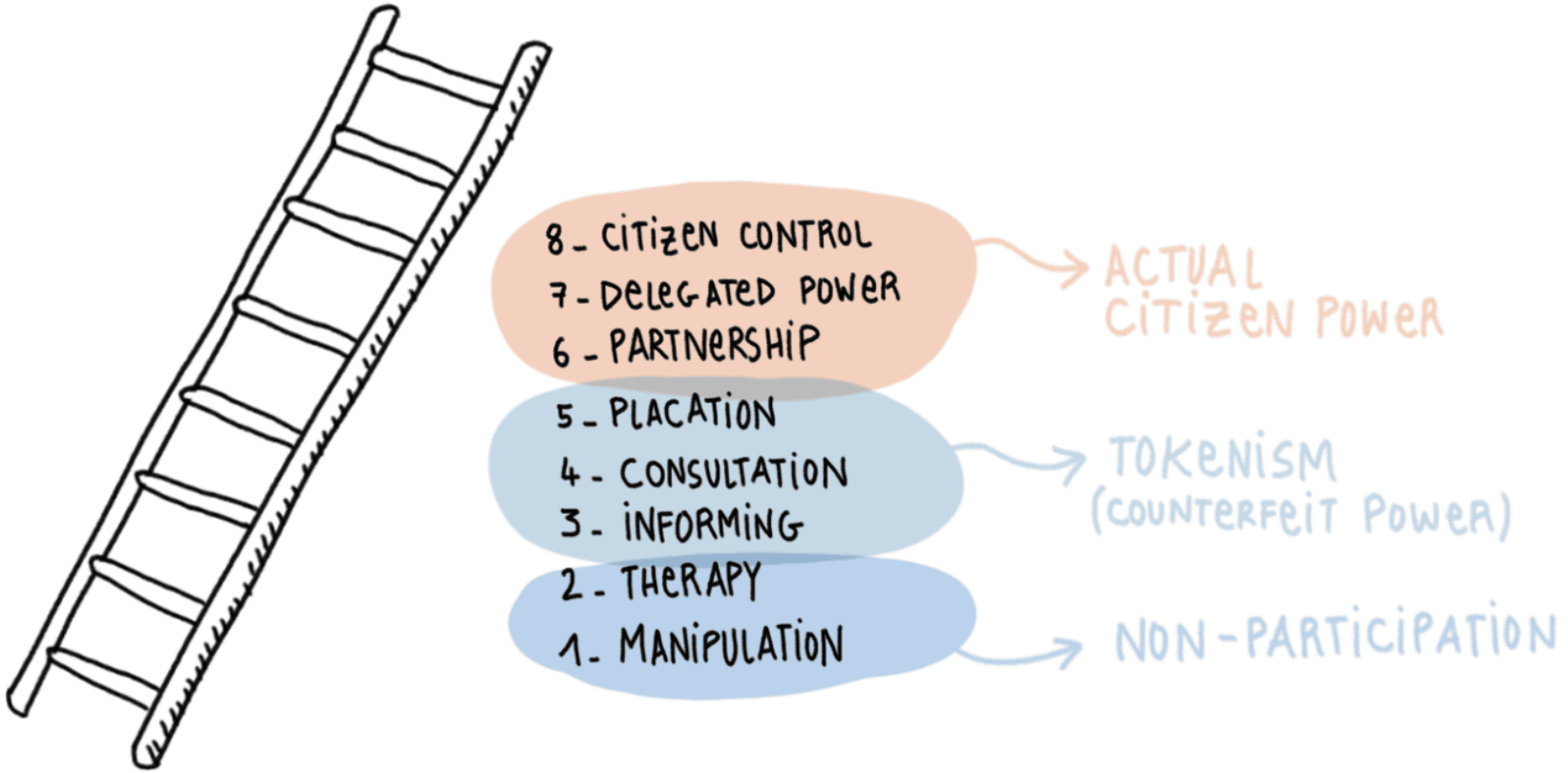
**Consortium deliverable:** We will have secured commitments to do so from at least 6 municipalities by the end of the project. M16-M24

# What is a participatory budget?

A participatory budget is an **innovative policy-making** (co-governance) **tool** that directly involves community members in the allocation of public funds.

# If done right

- it will help you make **better decisions**
- **bolster the legitimacy** of your decision-making and therefore strengthen democracy
- **increase trust** between community members and their elected representatives




# ARNSTEIN'S LADDER OF CITIZEN PARTICIPATION

# Sherry Arnstein, 1969

"My answer to the critical **what question** is simply that citizen participation is a categorical term for citizen power.

It is the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future.

It is the strategy by which the have-nots join in determining how information is shared, goals and policies are set.

**Participation without redistribution of power is an empty and frustrating process for the powerless."**

# Porto Allege (Brazil), 1989 – now, pioneer

In short, PB in Porto Alegre is an annual process open to all citizens of the voting age who decide on half of the city budget allocation (with an average budget of 1200$ per person).

Since than 7000 thousands cities have took part in participatory budgeting (2019).

Source: https://www.lincolninst.edu/publications/articles/participatory-budgeting-power-politics-porto-alegre

# 8 STEP PROCESS

For effective participatory budgeting

Inspired by Citizen Lab: https://www.citizenlab.co/ebooks-en/the-beginners-guide-to-participatory-budgeting

# 1. Define clear goals and ensure your team is trained

- **Create defined goals** for what you hope to achieve - **from motivation to final outcome**
- Extend this by **defining clear roles and responsibilities** for your team members who will be involved in the process
- Define what **success** looks like

# 2. Determine the best engagement strategy for your project

- **Map out the steps** you need to take to get to your goal
- Identify **predefined categories** the budget can be spent on, like schools/houses, improvement to pars, solar panels, climate justice, social activities,
- Define eligibility criteria*

*Make sure that any parameters for what can be funded are clearly communicated to your community before they engage.

# 3. Create a deliberate outreach plan to keep your community informed

- **Develop a proactive and defined outreach plan** for your participatory budgeting process to maximize your reach.
- **Ensure widespread inclusivity** by blasting a wide range of channels to announce the project and continuously encourage participation throughout the project phase.

# 4. Collect community input

- **Encourage residents** to start voting, commenting on, and proposing ideas.
- Let **them discuss local priorities** and elaborate on concrete projects so you can gather as much information as possible.

# 5. Analyze input and select final ideas

- **Analyze and check the proposed ideas** according to the eligibility criteria defined earlier in the process.
- **Select the final proposals**
- **Provide relevant feedback** to participants to show that you have thoughtfully deliberated on all the ideas presented.

# 6. Put the final ideas to a vote (2 months)

Depending on the type of participatory budget you're organizing,

- consider allowing community members to allocate specific public funds to several themes or ideas

Through the principle of communicating vessels or a shopping basket system

# 7. Close the feedback loop with continuous engagement

- Which ideas made the cut?
- Which issues were given the biggest share of the budget?
- What are the next steps?
- Who will implement the selected ideas?
- When will this happen, and can the community contribute to this step?

# 8. Implement the projects in your community

- **Turn ideas into plans, and plans into action** (pref. in 6-12 months max)
- Keep your **community up to date**, so they can see what's changing
- Consider **hosting community events** to show results, such as for park beautification projects
- **Engage local media** to cover implemented projects to help spread the word.

# Lahti (Finland) 2020 – now

In 2020, the City of Lahti (Finland) with 120.000 residents implemented a PB model. The budget for the pilot project was 100,000€.

Ideas ranged from:

- Community
- Environment
- Well-being
- Sustainability

Source: https://www.lahti.fi/en/city-and-decision-making/osbu/

# Lets get to work

Identify a part/activity of the ECAP of your region that could be realized/facilitated through a participatory budgeting approach

# Worksheet | Putting theory in to practice | 20-30 min

1. Define clear goals
   - What is the budget amount you will allocate through this project? What is your motivation for running a participatory budgeting project, and what would success look like?Who from your team should be involved? What is your timeline?

2. Determine the best engagement strategy
   - Who from your community can participate? Will topics be driven by community input, or do you have pre-defined categories the budget can be allocated to? **If you have pre-defined categories, what are they?** Will your community propose ideas, or also the budget allocation for selected ideas?

3. Create an Outreach plan
   - Which communication channels do you currently have at your disposal? How will you communicate about your launch? What about progress? And how about closing the feedback loop and communicating results after the process is finished? Is there background information that needs to be shared with all participants?

4. Implement the projects
   - Will residents have the option to get involved in the implementation of your projects? If yes, how?

Source: https://www.lincolninst.edu/publications/articles/participatory-budgeting-power-politics-porto-alegre

# Final recommendations

## On participatory budgeting and deliberative democracy

Source: https://www.idm.at/en/idm-pps-1-2023-citizens-engagement-in-central-and-eastern-europe-in-search-of-systemic-solutions/

# 1. Long term commitment

**Public bodies in CEE** interested in implementing deliberative methods (such as PB) should not choose to use them simply because they are fashionable.

Once there is a commitment to establish a representative deliberative process, **it should be institutionalized** so that it happens regularly and creates a culture of participation

# 2. Open and transparent process

The public administration should make sure that **the process is as open and transparent** as possible and that it is accountable and auditable.

It should be easy to demonstrate that it is not biased or attempting to skew outcomes.

# 3. No “one-size-fits-all”

As there is no **“one-size-fits-all”** approach to PB, each country, region or municipality can create a tailored made model that fits it best.

Unless the random selection of citizens forms part of the selection process and fundamental phases of the process, such as learning, deliberating, and drafting recommendations collectively, are preserved.

# 4. Do not reinvent the wheel

CEE countries should not reinvent the wheel but get inspired by countries in the region that already have experience, such as **Finland** and **Poland** and learn from their lessons and good practices.

Another **source of knowledge** is the international organisations that closely follow the surge in deliberative democracy initiatives, such as the OECD and the Council of Europe.

**Warsaw:** https://participedia.net/case/7815 and **Lahti:** https://www.lahti.fi/en/city-and-decision-making/osbu/

# Thank you!

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