

REPORT

Renewable Energy Options on the Municipal Level

SUMMARY OF THE CONNECTIVE CITIES PROJECT PLANNING WORKSHOP
11. - 13. JUNE 2024 IN SARAJEVO, BOSNIA AND HERZEGOVINA

Partners of Connective Cities



with its



Commissioned by



Executive Summary

The workshop continued the Learning Process in Southeast Europe, launched in October 2023 in Tbilisi, Georgia, with 19 municipalities from 7 countries focusing on renewable energy options. Participants engaged in three days of peer-to-peer consultations, sharing good practices and refining their project concepts with peer guidance. The workshop facilitated information exchange and helped develop actionable projects. Key project concept elements were addressed through introductory guidelines, moderated workshops, and feedback sessions, leading to the improved preparation of municipal renewable energy projects.

Objectives and Structure

Objective: Enhance participants' abilities to design Renewable Energy (RE) and Energy Efficiency (EE) projects and refine project concepts.

Expected Results:

- Facilitate the exchange of information and good practices between participants and experts.
- Generate, refine, and discuss project ideas collaboratively.
- Support participants in the advancement of their project concepts.

The projects were structured into six key sections to ensure thorough planning and execution:

- 1. Background, Focus, and Target Groups:** Provides context, highlights the project's focus areas, and identifies target groups.
- 2. Goal, Objectives, and Key Indicators:** Defines the overall goal, specific objectives, and success indicators.
- 3. Outputs and Activities:** Describes expected results and the activities to achieve them.
- 4. Costs and Financing Sources:** Details costs per output and identifies funding sources.

Participating Municipalities and Institutions

Municipalities:

- City of Mostar, Bosnia & Herzegovina
- City of Sokolac, Bosnia & Herzegovina
- City of Senaki, Georgia
- City of Ceadir-Lunga, Moldova

Good Practices:

- City of Križevci, Croatia
- City of Remscheid, Germany
- City of Priboj, Serbia
- City of Kragujevac, Serbi

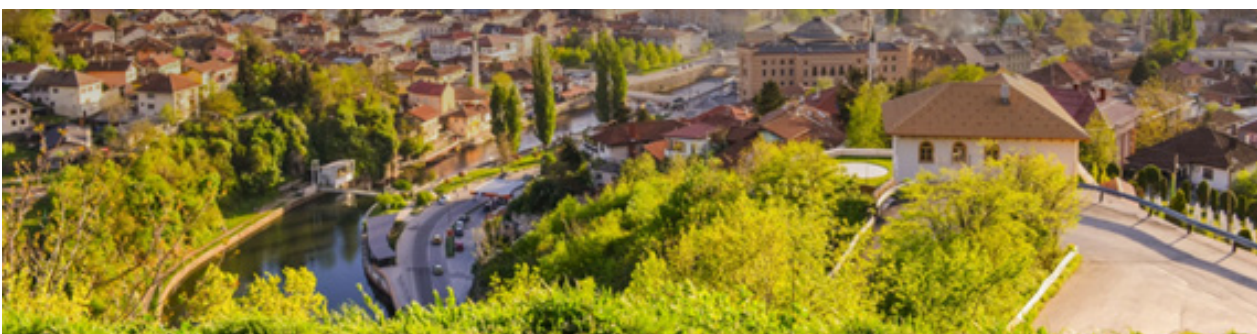
Institutions:

- Environmental Ecological Association DEA, Senaki, Georgia
- ENERGETIKA d.o.o., Kragujevac, Serbia
- Sarajevo Economic Region Development Agency (SERDA)
- Alliance for Energy Efficiency and Renewables (AEER), Chişinău, Moldova

Facilitated by EDA Development Agency and Connective Cities

- 5. Timeline:** Outlines the schedule of activities and milestones.
- 6. Risks and Mitigation:** Identifies potential risks and strategies to address them.

The structure aligns with EU and other donor requirements, enabling elements prepared during the workshop to be easily transferred into a logical framework for further project development. Participants received a project structure designed for flexibility, allowing adaptation to various funding sources.



Municipal Projects

Introduction

The workshop began with a keynote discussion that centered on the crucial role of local governments in advancing the energy transition. Energy experts and local leaders highlighted the importance of local initiatives in renewable energy, the democratization of energy production, and the significance of energy efficiency. The discussion underscored that local institutions are best positioned to address community concerns and drive the transition through education, stakeholder involvement, and infrastructure development.

Examples from various cities demonstrated that a bottom-up approach fosters tailored solutions and a sense of ownership among residents. The conversation emphasized the need for an inclusive and equitable transition process, ensuring that no one is left behind. The democratization of the energy transition was identified as a key principle, crucial for mitigating negative impacts and improving local quality of life. Continuous community engagement and innovation were highlighted as vital for overcoming barriers and ensuring the successful implementation of energy projects.

Mostar and Sokolac

The cities of Mostar and Sokolac in Bosnia and Herzegovina are facing the challenge of overall high energy costs in the municipality, which reduce the available budget to plan and implement new communal projects. As a potential solution, both municipalities plan the installation of photovoltaic-plants on the roofs of municipal buildings. The produced electricity is set to be used for the municipal consumption, and, in case of exceeding production levels, to be sold to other consumers in the local grid.

The key issue for the deployment of proposed solution is the lack of budget funds for implementation. Thus, the project aims to create viable financial models to support the initiation and maintenance of energy community projects. It emphasizes the importance of sustainable financing to foster local renewable energy initiatives and democratize energy production. By involving various stakeholders, including local governments, community members, and financial institutions, the project aims to develop frameworks that ensure long-term economic and environmental benefits.

Overview of the municipal projects

Following project ideas were pitched by the municipal representatives:

- **Mostar and Sokolac: Development of sustainable financing concepts for the establishment and operation of energy community projects**
- **Ceadir Lunga: Improving energy efficiency of public buildings**
- **Senaki: Implementation of energy-efficient technologies in municipal buildings**
- **Priboj: Development of the use of solar energy in public buildings**

Senaki

Senaki in Georgia is burdened with outdated and energy inefficient public and residential buildings from soviet period, which urgently require energy efficient renovation to reduce the energy expenses, improve the local air quality and reduce the emissions by 35% in 2030 in order to fulfil the promise of the city's sustainable and energy action plan. The Senaki has initiated this energy renovation process through development of project concept note for Sport Complex Senaki and procurement of energy audit for the building. The project focuses on leveraging local resources to implement energy-saving measures, reduce carbon emissions, and foster a greener, more sustainable environment. Key elements include the introduction of renewable energy technologies, upgrading existing infrastructure to be more energy-efficient, and engaging the community through awareness campaigns and educational programs. By adopting these measures, Senaki Municipality aims to set a benchmark for eco-friendly development, improve the quality of life for its residents, and contribute to global efforts in combating climate change.

The key challenge for the next phase of project development is the finance mobilization to bridge the gap between the needed investment cost and available financing secured through local budget.

Ceadir-Lunga

Ceadir-Lunga in Moldova has been making substantial progress towards low-carbon transition, implementing energy efficiency renovation and utilizing renewable energy potential on public buildings through grant-based financing, however the progress is currently hampered with lack of funding for renovation of remaining buildings.

Ceadir-Lunga aims to solve energy shortage issues, using solar energy in public and private sectors, with developing implementation and financing mechanisms at the same for similar initiatives.

Priboj

The city of Priboj in Serbia has been invested into decarbonizing their municipality for a long time. With the help of the GIZ, the municipality has been investing over 9 million Euro into the decarbonization of their heating system and into utilizing the regions' biomass potential. The municipality of Priboj has committed itself to reduce the emission of CO₂ into the atmosphere by 40% in its territory by 2030 and the next step in the transition process is to harness solar energy potential. The project aims to utilize the region's solar potential to generate clean energy, create job opportunities, and foster economic growth. This initiative is positioned as a key component in Priboj's transition to a low-carbon economy, highlighting the benefits of renewable energy adoption for local communities.

Given that their focus was primarily on district heating and energy efficiency renovation over the last 10 years, they understand the need to build capacities and gain support in development of prosumer and energy community projects that will enable the achievement of project goals.

Good Practices

City of Remscheid, Germany: Energy Efficiency in Schools and Childcare Centers

Mrs. Luisa Schlarb, Climate Protection, Sustainability and Mobility Department

Remscheid's initiative focuses on improving energy efficiency in municipal schools and childcare centers. The project includes upgrading insulation, installing energy-efficient lighting, and integrating renewable energy sources. In addition to the technical upgrades, the city has implemented innovative capacity-building activities, such as forming energy teams and conducting energy consultations with students and staff. This comprehensive approach has reduced energy consumption by 28,700 kWh annually and cut greenhouse gas emissions by 75%, showcasing the city's commitment to sustainability.

City of Križevci, Croatia: Energy Community Project

Mrs. Ivana Dubravec, Energy Efficiency, Environmental Protection, and Spatial Planning Advisor

Križevci aims to achieve energy independence by 2030 through a community-driven approach. The city's efforts include the establishment of an energy community leveraging local renewable resources and enhancing energy efficiency. Notable initiatives include successful crowdfunding campaigns for solar power installations on public buildings, which have garnered significant community support. Križevci's model of democratizing energy production and consumption serves as a powerful example for other municipalities striving for sustainability and local economic resilience.



Peer-to-Peer consultation session

City of Kragujevac and Priboj, Serbia: District Heating and Energy Efficiency

Mr. Andreja Ilić, director, Energetika Kragujevac and Mr. Saša Vasilić, Deputy Mayor of Priboj

The presentation highlighted efforts to transition to greener district heating systems. In Kragujevac, the focus is on utilizing waste heat from a data center, promising significant energy savings and reduced emissions. Priboj's initiative involves replacing fossil fuels with renewable, local energy sources for district heating. These projects demonstrate the potential for green transitions in heating systems, offering models for other cities to enhance energy efficiency and sustainability.

Site Visit to Ilijaš

On the second day of the conference, the participants visited Ilijaš municipality, located just outside of Sarajevo. The municipality is home to a model project for improving energy efficiency in buildings within the Sarajevo Canton (EE Model) serves as a universally applicable, transparent, non-discriminatory, and socially sensitive framework for promoting and supporting energy efficiency projects in the region. The primary objective of the EE Model is to provide systemic support to citizens in enhancing the energy characteristics of residential buildings, particularly by improving heating efficiency under more favorable conditions. By reducing the energy required to heat these buildings, the model aims to decrease air pollution and enhance user comfort. Additionally, the EE Model seeks to minimize the consumption of solid fuels, especially in urban areas, and promote the sustainable use of natural gas for heating. The core principle of the EE Model is that the costs of energy efficiency measures are repaid through the savings achieved, ensuring that building owners do not face increased

expenses due to these investments. This principle is encapsulated in the project's slogan: WARM THE BUILDING - HALF THE BILL.

During the visit of a residential building in Ilijaš, which benefited from the EE Model, following key points were highlighted:

- The importance of adaptive management to mitigate risks, particularly those that arose due to legal obstacles, the impact of COVID-19 on material and equipment prices, and the complexity of intergovernmental cooperation
- The positive effects and benefits of energy efficiency renovation projects, as expressed by end-users. Despite the challenges encountered during the process, these residents remain willing to participate in future projects, as they have experienced significant reductions in energy bills and improved comfort levels in their homes.

Next Steps

The workshop improved the capacities of participants for designing renewable energy and energy efficiency projects. Key outcomes included:

- Exchange of valuable information and good practices among participants and experts.
- Development and refinement of project concepts.
- Strengthened networks and collaboration among municipal teams and experts.
- Developed understanding of importance and need for end-user and citizen active engagement in project development and implementation.
- Identified key risks and mitigation measures for ensuring smooth project implementation.
- Increased awareness and built capacities for deploying quality assurance mechanisms for technical documentation and infrastructure works and developing a robust monitoring, reporting and verification framework for project activities.
- Increased understanding of needs, opportunities and pathways for finance mobilization to facilitate project implementation.
- Developed a clear, concise and implementable action plan for further work of municipal teams on project concepts development and finalization.



Residential building in Ilijaš that benefitted from the EE model

A key objective for the time after the conference is the completion of the project concepts, with assistance from experts, GIZ staff, and the moderators. Following outline was suggested to help the municipal representatives develop their project further, eventually reaching the goal of a fully-fledged project proposal:

1. **Define Tasks:** Discuss and determine what needs to be done. Clearly outline each task required to move the project forward.
2. **Assign Responsibility:** Identify who is in charge of each task. Assign clear responsibilities to ensure accountability and progress.
3. **Involve Key Participants:** Determine who else must be involved. Engage all necessary stakeholders and team members to ensure comprehensive planning and execution.
4. **Set Deadlines:** Establish when each task needs to be completed. Create a timeline to keep the project on track and ensure timely delivery.
5. **Utilize Expert Support:** Seek expert support for specific details in the project. Leverage their knowledge and experience to enhance the quality and feasibility of the project proposals.

Connective Cities – International Community of Practice for Sustainable Urban Development

Since 2013, Connective Cities promotes the world-wide exchange of municipal expertise, disseminates proven-practice solutions for sustainable urban development, and supports peer learning between German and international experts from municipalities, as well as the jointly development of project ideas within the framework of structured learning processes.

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For more information, please visit:
www.connective-cities.net/en/

Conclusion

The workshop was a success, achieving its objectives of improving participants' capacities for designing renewable energy and energy efficiency projects. The interactive format, expert guidance, and peer-to-peer learning approach were highly effective. Continued support and follow-up activities are recommended to build on the progress made during the workshop. The workshop participants praised the practical insights they gained and the collaborative work environment present during the three-day conference. They appreciated the opportunity to learn from good practices and engage in peer-to-peer consultations. Suggestions for improvement included more time for hands-on activities and additional sessions on specific technical topics.

IMPRINT

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