



D2.4 Report on municipal roadmaps & action plans

February 2024

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Introduction

A key element of the LIFE LOOP project is the development of the Community energy Roadmaps that the pilots have been developing, in parallel with the community energy workshops and with the support of the Task forces (Electra in Crete; REGEA and ZEZ in Zagreb; Cooperativa de Energie in Bistrita) led by REScoop.eu and the overall facilitation of Energy Cities.

A roadmap is a strategic plan which is the outcome of collaborative effort and a participatory process that brings together all relevant stakeholders of the local community. A roadmap allows all the participating stakeholders to make the best use of the locally available renewable energy resources, by benefitting from all related skills, assets, capacities and opportunities and thereby, reduce drastically the impact of the climate and energy crisis on their community. The roadmap of each pilot is tailored to the specific local needs and specificities of the relevant area, which focuses and guides the respective efforts and actions towards a shared vision. This strategic plan analyses the dynamics of the local community, articulates the goals and develops alternative pathways, actions and strategies to meet the shared vision.

In all three pilots their design started from analysing positions, mapping relevant stakeholders and incentives, and defining avenues for city and citizen collaboration in local solar energy as well as energy retrofit projects. As the three pilots had different visions about their future (that were linked to the concrete objectives of the LIFE LOOP project), different strategies and concrete actions were developed for the upcoming period.

Area	New citizen-led initiatives	(Municipal) actors with increased skills	Investment triggered €	CE energy savings (GWh)	Additional CE RE (GWh)	Authorities replicating	Citizens involved	Citizens Informed	Carbon savings (tCO2)
Technical partners								612 054	
Pilots									
Croatia, Zagreb	5	150	3 000 000	0,00	3,90	10	10 000	100 000	1 073
Greece, Crete	5	200	4 000 000	0,80	1,30	10	10 000	108 930	578
Romania, Bistrita	5	175	5 580 000	6,00	4,68	5	700	90 000	2 937
Satellites									
Bulgaria, Gabrovo	5	30	500 000	1,50	0,55	3	300	3 000	563
Italy, Ussaramanna	2	40	100 000	0,07	0,08	3	100	1 345	39
Italy, Villanovaforru	2	40	100 000	0,07	0,08	3	100	1 349	39
Cyprus	3	100	1 000 000	0,30	0,60	3	3 000	62 510	247
Romania, Tulcea	2	70	2 528 000	2,50	0,39	5	500	5 000	795
Associated Partners									
Kosovo, Pristina	1	30	50000	0,03	0,04	2	200	2 000	19
N. Macedonia, Skopje	1	30	50000	0,03	0,04	2	200	2 000	19
Bosnia, Mostar	2	30	32000	0,02	0,01	2	250	2 000	9
Croatia, Porec	1	15	25000	0,00	0,02	2	100	2 000	6
Serbia, Kragujevac	1	30	50000	0,03	0,04	2	200	2 000	19
Totals	35	940	16 815 000	11,34	11,72	52	25 650	994 188	6 342

Figure 1: LIFE LOOP Objectives





All the initiatives aim to establish community energy projects and, in parallel, contribute to awareness raising on the value of community energy. Especially in Greece and in Croatia, the ambition is to support citizen involvement and mobilisation of private funding for community energy projects. While in Greece the broader management of the community lies on the hands of the citizens, in the case of Croatia, and certainly in the case of Romania too where there is no supporting framework, the local authorities have the main control of the energy projects and aim to involve the local communities. In all three pilots, the initiatives wish to generate renewable energy and contribute to energy savings with the active participation of the local communities. For this to happen, all pilots, have been also engaging and training municipal actors.

In Greece, Minoan has developed many different strategies to ensure that it will meet all of the targets and get closer to materialise their vision. Specifically, they have a strategy for approaching the municipalities and providing them with information about the opportunities of collaboration. In addition, the community aims to provide training and specialized advisory support to the local municipalities for the development of community energy projects with the engagement of local citizens. The energy community has a strategy to continue developing energy projects involving citizens, local municipalities, local SMEs and communities in vulnerable situations. Energy saving actions and projects have also been planned to increase the energy efficiency of buildings and other municipal infrastructure and promote incentives to reward and encourage participation in response-demand programmes. The organisation of working groups for internal coordination has been also envisioned, as well as the organisation of wider community meetings and events for awareness raising. Minoan has further developed a strategy for a communication network between the local authorities of Crete and the energy communities. Lastly, policy advocacy actions have been planned in collaboration with local municipalities and the Region of Crete, and with the assistance of the local energy agencies to anticipate and receive government funding for the development of community-based renewable energy projects by broad-based energy communities.

In Croatia, the city has decided to replicate the Vienna business-model, basically consisting of green bonds that citizens can invest in. The main strategies involve the testing of the PPA model on 16 different locations in the City of the Zagreb, and the installation of the solar PVs for self-consumption by the City company. For a part of these locations, the city is also developing a tender for the development of a genuine community energy project managed by a local energy community.



This project has received funding from the European Union's LIFE programme under grant agreement No 101077085

In Romania, the strategy of Bistrita focuses on the installation of solar thermal and photovoltaic panels on 15 public buildings. In addition, the city is planning to train the local residents and users of these buildings with the goal to help them maximise their consumption of locally generated renewable electricity, heat as well as hot water, reducing in this way their costs. Another strategy focuses on the refurbishment and installation of photovoltaic panels on 50 blocks of private and social apartments in the municipality of Bistrita for the provision of the necessary electricity in the common areas of the block. Lastly, a coordinated and collaborative action is being planned to take advantage of the local renewable resources by installing photovoltaic panels on 100 private houses to cover the local electricity needs.

The next pages present the translation of the action plans that have been designed by the three pilots in order to achieve their vision. These action plans are not static documents, and might change as they are meant to support a rather dynamic process that guides and accompanies the communities throughout their lifetime. The action plans will also be used by the LIFE LOOP team to monitor the progress of the project's implementation work.

The full roadmaps are presented in the local languages as an Annex. They capture the local context, the opportunities, challenges and synergies identified, the vision and concrete objectives, the financing plan and the overall monitoring plan, of each of the three pilots.



Crete Action Plan

Approach to the Municipalities, with the aim of informing them about the actions and work of the Minoa Energy Community in Crete, and primarily their engagement and the initiation of discussions on the possibilities of cooperation between the Municipalities and the Community and the mutual benefit from it.

Actions	Timetable	Milestone/ Deliverable	Responsible
Mapping of municipalities we will approach	January 2023 - January 2024	A document based on which we identified the possible municipalities to be included in the community, as well as their needs, the possibilities of cooperation	Katsaprakakis Dimitris
Networking with the municipalities we have identified - Scheduling meetings	January 2023 - March 2024	Report of meetings with municipalities	Katsaprakakis Dimitris
Organising information meetings and presenting Community actions to Municipal Councils and Municipal Managers	January 2023 - April 2024	Briefing of 6 municipalities on Minoa and the project, as well as its future projects.	Katsaprakakis Dimitris
Inclusion of at least six (6) additional new municipalities in the Community	January 2023 - June 2024	Inclusion of 6 new municipalities in the Minoa Energy Community.	Katsaprakakis Dimitris

Provide specialized advisory support to municipalities for the development of community projects and community energy and the right of active citizen participation in them.

Actions	Timetable	Milestone/ Deliverable	Responsible
Discussions with municipal managers, selection and preparation of 3-5 energy upgrade studies in total	January 2023 - March 2024	Selection of municipal infrastructure and energy upgrade studies	Katsaprakakis Dimitris
Preparation of studies	March 2024 - September 2024	Organisation and delivery of studies (at least 3 studies for the new municipalities involved)	Katsaprakakis Dimitris
Participation in projects for the production of electricity or heat from renewable energy sources and energy saving or in a remote energy management network.	September 2024 - September 2025	Identification and inventory of possible sources of funding under European programmes for the development of projects.	Giannakoudakis Giannis

Training and briefing of municipal officials and municipal representatives.			
Actions	Timetable	Milestone/ Deliverable	Responsible
Creation of an Introduction to Energy Communities Training Package	January 2024 - March 2024	Completion of training material (presentations, interactive material, video development, general training material)	Katsaprakakis Dimitris
Workshops and Seminars for Municipal Employees, Representatives and Municipal Councils	March 2024 - September 2025	Implementation of training workshops/4 workshops in municipalities and 2 in chambers (expected participation of 500 people).	Katsaprakakis Dimitris

Establish a communication network between the local authorities of Crete and the energy communities.

Actions	Timetable	Milestone/ Deliverable	Responsible
Joint information event for the Municipalities with the partnership of the Region of Crete	January 2024 - June 2024	Implementation of an information event	Tsekouras Aris
Determination of contact persons of the Municipalities and the Region	July 2024	List of names and contact details of municipal and regional officials	Dakanali Irini
Development of a communication strategy with stakeholders.	August 2024 - September 2024	Definition of means of communication and information exchange (mailing list, drive etc.)/Number of emails, publications.	Dakanali Irini

Develop more Community RES projects involving citizens, vulnerable households, SMEs, and municipalities.

Actions	Timetable	Milestone/ Deliverable	Responsible
Information to the public and municipalities	January 2024 - September 2025	Workshops and media posts. 5 workshops to inform the public and an equal number of posts.	Viskaduros George
Planning and maturation of new RES projects	January 2024 - September 2025	Studies and licensing of new projects.	Katsaparakakis Dimitris
Implementation of new RES projects and support to vulnerable households	January 2024 - September 2025	2 PV power station projects	Tsekouras Aris



Energy saving actions and projects to increase the energy efficiency of buildings and other municipal infrastructure and promote incentives to reward and encourage participation in response–demand programmes.

Actions	Timetable	Milestone/ Deliverable	Responsible
Educating community members about the need to save energy and possible ways to save energy	January 2024 - September 2025	Public information workshops 26 public information workshops in various areas of Crete. (Expected number of participants 1.500 - 3.000 people)	Tsekouras Aris
Participation in renewable electricity or heat generation and energy saving projects or remote energy management network	January 2024 - September 2025	Savings of around 578 tonnes of CO2. Energy savings through energy efficiency and more efficient use of renewable energy of 0.80 GWh.	Katsaprakakis Dimitris Tsekouras Aris Viskaduros George



Policy advocacy actions in collaboration with local municipalities and the Region of Crete, and with the assistance of agencies to anticipate and receive government funding for the development of community-based renewable energy projects by energy communities with a broad local support base.

Actions	Timetable	Milestone/ Deliverable	Responsible
Political advocacy actions in cooperation with local municipalities and the Region of Crete, as well as with the assistance of institutions for the revision of national legislation in favour of energy communities	January 2023 - September 2025	Review of the national legislation. 2 meetings with officials of the Energy Ministry / 5 letters to relevant bodies.	George Viscadouros
Seeking European and national programmes to support our cooperation with municipalities in order to jointly develop projects	January 2023 - September 2025	Announcements on new funding programmes and community integration	George Viscadouros

Organisation of working groups			
Actions	Timetable	Milestone/ Deliverable	Responsible
Mapping of members based on the skills form	January 2024 - March 2024	Grouping members according to their skills	Iakovopoulou Chrysa
Creation of the 3 working groups and the person in charge per working group	March 2024	Creating working groups	Iakovopoulou Chrysa
Invitation of members by the persons in charge of each working group, allocation of tasks, drawing up work plans	April 2024	Starting working groups	Giannopoulou Efi



Organisation of discussion meetings to get to know and strengthen local areas and create awareness programs

Actions	Timetable	Milestone/ Deliverable	Responsible
Organisation of 2 interactive events in schools and universities.	January 2024 - September 2025	Two interactive information events in schools	Zidianakis George
Organisation of 2 interactive events open to the public	January 2024 - September 202	Two interactive information events open to the public	Zidianakis George



Zagreb Action Plan

	Jan 2024	March 2024	May-June 2024	June-Nov 2024	December 2024	March-Sept 2025
Goal	Testing PPA model on 16 locations in the City of the Zagreb	Preparation of process for City of Zagreb company for installation of photovoltaics	Preparation of process for City of Zagreb for installation of photovoltaics for self-consumption	Process of the installation of the photovoltaics power plants for self-consumption.	Connection to the grid all installed power plants for self-consumption.	Completion of installation of remaining power plants for self-consumption..
Activities	Finish public tender and start process of Installation of 16 photovoltaics plants	Preparation for around 18 photovoltaics plants	Preparation of public tender and starting process for installation of 54 photovoltaics plants	Contracting of 54 PV plants.	Connection to the grid of 54 PV plants.	Full operation of 54 PV plants.
Predicted output	1.4MW, with production approx. 1.6 GWh	Approx. 4 MW, approx. 4.5 GWh	Approx. 5 MW, approx. 5.7 GWh	Approx. 5 MW, approx. 5.7 GWh	Approx. 5 MW, approx. 5.7 GWh	Approx. 5 MW, approx. 5.7 GWh
Community involvement	Potential involvement of citizens as co-investors through green bonds. Specific details TBD.	Potential involvement of citizens as co-investors through green bonds. Specific details TBD.	Involvement as co-investors through green bonds. Planned 2,5 MW (2,75 GWh, 2,2 Meur) offered to citizens through green bonds.	Involvement as co-investors through green bonds. Planned 2,5 MW (2,75 GWh, 2,2 Meur) offered to citizens through green bonds.	Involvement as co-investors through green bonds. Planned 2,5 MW (2,75 GWh, 2,2 Meur) offered to citizens through green bonds.	Involvement as co-investors through green bonds. Planned 2,5 MW (2,75 GWh, 2,2 Meur) offered to citizens through green bonds.



Bistrita Action Plan

Participatory action to local renewable resources through the refurbishment and installation of photovoltaic panels on 50 blocks (private and social) in the municipality of Bistrita, to provide the necessary electricity in the common areas of the block.

Actions	Deliverable	Timeframe	Responsible
Enrolment in the programme, by submission of the application by owners' associations	<i>Application registered at the Bistrita City Hall and registered in the records of the specialized department that manages the elaboration of the related Technical and Economic Documentation.</i>	2022 – 2025	<i>Owners association, Bistrita City Hall - responsible for each block lot: Ioan Papoi, Angela Muresan</i>
Formalising the partnership between the municipality and the owners' associations	<i>Mandate contracts concluded between the Municipality of Bistrita and owners' associations</i>	2023 – 2025	<i>Owners Association, Bistrita City Hall Ioan Papoi, Angela Muresan</i>
Preparation/update of the annual investment plan	<i>List of investments related to the annual Local Budget</i>	2023-2024-2025	<i>Bistrita City Hall Investment Director Lia Ivascu</i>
Preparation and approval of the Technical and Economic Documentation	<ul style="list-style-type: none"> - <i>Technical expertise;</i> - <i>Energy audit;</i> - <i>Documentation for the Approval of Intervention Works (DALI);</i> - <i>General and analytical estimate;</i> - <i>Decision of approval of the DALI by the Local Council of Bistrita Municipality;</i> 	2023 - 2025+	<i>Bistrita City Hall - technical responsible appointed by the Director Lia Ivascu, Project manager designated by the director Liliana Cocesi, Designer, Owners Association, Bistrita City Council</i>



	- Decision approving the value of the investment on behalf of the Owners' Association.		
Identifying and contracting grant funding	Financing contract concluded	2022 - 2025	Funder, Bistrita Municipality
Contracting and execution of works, including installation and commissioning of the photovoltaic panels included in the investment	Works contract concluded	2022 – 2025	Ministry and Mayor of Bistrita Municipality
Acceptance of works	Acceptance report on completion of works	2024 – 2025+	Builder, Bistrita City Hall, director Liliana Cocesiu, head of service Cristian Timoce and director Lia Ivascu
Calculation of the individual amount to be paid and imposition of the special fee to the owners	- Decision of the Local Council of the Municipality of Bistrita;	2024 – 2025	Bistrita City Hall, Owners Association, Builder
Payment of the own contribution in instalments	- Individual payment notification	2024 - 2034	Bistrita City Hall, Bistrita City Council, Owners, Owners Association

Participatory action to harness local renewable resources by installing solar thermal and photovoltaic panels on 15 public buildings and organisation of trainings to provide electricity, heat g and hot water.

Actions	Deliverable	Timeframe	Responsible
Identification of learning units included in the programme	Energy audit report and technical expertise carried out	2023	Bistrita City Hall, 2030 Sustainable Development Department, Technical Department
Preparation/update of the annual investment plan	List of investments for the annual local budget	2023+-2024-2025	Educational establishments in the municipality of Bistrita
Preparation and approval of the Technical and Economic Documentation	<ul style="list-style-type: none"> - <i>Documentation for the Approval of Intervention Works (DALI);</i> - <i>General and analytical estimate;</i> - <i>Decision of approval of the DALI by the Local Council of the Municipality of Bistrita</i> 	2023-2024	Bistrita City Hall, Investment Director Lia Ivascu
Identification and contracting of grant funding	Financing contract concluded	2024	Bistrita City Hall, Designer, Bistrita City Council
Contracting and execution of works, including installation and commissioning of photovoltaic panels included in the investment	Works contract concluded	2025-2026	Financier, Municipality of Bistrita, Sustainable Development Department 2030
Acceptance of the works	Acceptance report on completion of works	2026	Builder, Municipality of Bistrita, Educational Units
Monitoring of project results during the sustainability period	Sustainability reports	2027 - 2031	Municipality of Bistrita, Education Units, Builder



Cooperative action to harness local renewable resources by installing photovoltaic panels on 100 individual houses to cover the energy electricity needs

Actions	Deliverable	Timeframe	Responsible
Dissemination of best practices with on-site examples and possible partnerships for additional energy production	List of signatures and event photos	June 2023	<i>Cristina Cudrec</i> <i>Iulia Popartac</i>



Annex – Complete Roadmaps

- Crete
- Zagreb
- Bistrita

