ENES-CE – Collaboration between public bodies and citizen energy groups in implementing local energy strategies in Central Europe

# D.T3.14.3 – LESSONS FROM DEVELOPING CITIZEN ENERGY IN CENTRAL AND EASTERN EUROPE

## ABOUT THE PROJECT ENES-CE

PROJECT ENES-CE ADDRESSES THE CHALLENGES IN ENGAGING CITIZENS IN CREATION, IMPROVEMENT AND ADOPTION OF QUALITY ENERGY PLANS WITH A BOTTOM-UP QUADRUPLE HELIX APPROACH, WHERE CITIZENS PLAY A PIVOTAL ROLE. BY IMPLEMENTING THE PROJECT ACTIVITIES, THE PROJECT PARTNERS FROM GERMANY, POLAND, HUNGARY, SLOVENIA, CROATIA AND ITALY MANAGED TO GO DEEPER IN CREATING SOCIAL INNOVATION ACTIVITIES BY ESTABLISHING CITIZEN ENERGY GROUPS/COOPERATIVES AND INCLUDE THEIR CITIZENS IN THE WHOLE PROCESS OF CREATING AND DIRECTING THE LOCAL STRATEGIES TOWARDS GREEN AND SUSTAINABLE ENERGY AND CLIMATE RELATED PROJECTS WHICH ARE CRUCIAL IN ACHIEVING CARBON NEUTRALITY AT LOCAL LEVEL.

## INTRODUCTION

In the field of green and sustainable energy (e.g., renewable energy production, energy savings, investment in local energy transition projects, etc.) as well as in the broader field of citizens' concern for better and more sustainable quality of life, collaboration between different citizen initiatives including energy communities, citizen energy cooperatives and other forms of citizen energy groups and local authorities plays a vital role.

To succeed in reaching the goals of an energy transition, moving away from carbon emitting energy resources to renewables, everyone needs to participate in its implementation. For everyone to participate, engagement practices are key, and local authorities, being the closest body of government to people, are strategically important. Without gaining the support and engagement of an approving population, the energy transition is a slow and protracted movement.

### QUICK FACTS ABOTU ENES-CE PROJECT

> Number of partners: 10
> Number of countries: 6
> Total project budget: 1.830.574,50 €
> EU-contribution: 1.516.811,19 €
> Number of pilot projects: 6
> Implementation period: 01.04.2019. – 30.6.2022.

This issue was tackled by the ENES-CE project in different regions across Central European countries where the local energy planning strategies are

developed with low public consultation and citizen input. Therefore, the project aims at filling the gap with a quadruple helix approach where citizens are playing a pivotal role which will led to sustainable regional development while the efficacy of the intervention will be directly linked to the development of energy cooperatives and other forms of citizen energy groups. In overall, the project has increased the acceptance of low carbon investments and eased the achievement of existing low carbon development strategies and energy plans.

Experimentation with initiatives such as establishment of energy cooperatives and other citizen energy groups and implementing community energy projects in different regions of project partner countries has resulted in significant lessons learned on what works and what does not work well. All the lessons learned are divided into five main categories: regulatory barriers, managing and financing green investments and actions, public engagement, technical issues and using ENES-CE participative tools for citizen engagement.

## ACHIEVED ENES-CE PROJECT RESULTS

1. ACTIVE INVOLVEMENT OF CITIZENS IN THE PROCESS OF DEVELOPMENT, REVISION AND IMPLEMENTATION OF PLANNING AND STRATEGIC DOCUMENTS IN THE ENERGY SECTOR ENSURED.
2. ACHIEVED CONTRIBUTION TO SUSTAINABLE REGIONAL DEVELOPMENT THROUGH THE IMPLEMENTATION OF 6 SPECIFIC PILOT PROJECTS IN PARTNER REGIONS IN CENTRAL EUROPE.
3. A SET OF TOOLS TO SUPPORT LOCAL PUBLIC AUTHORITIES IN THE PROCESS OF ENGAGING CITIZENS IN LOCAL ENERGY PLANNING DEVELOPED.
4. DEVELOPMENT OF SUSTAINABLE ENERGY AND CLIMATE ACTION PLANS AND OTHER ENERGY PLANS FOR LOCAL AUTHORITIES ENSURED.
5. IMPROVEMENT OF MANAGERIAL COMPETENCES OF LOCAL GOVERNMENT EMPLOYEES WORKING ON DEFINING INNOVATIVE ENERGY POLICIES AND PROGRAMMES.

# LESSONS LEARNED RELATED TO REGULATORY BARRIERS

Regulatory barriers in energy sector are in simple language defined as stare, regional or even local laws, regulations and policies which are adversely affecting the implementation of green and sustainable projects or different citizen initiatives in green energy solutions. In addition, these barriers control the diffusion of renewable energy and prevent it from effectively competing with traditional energy and hamper achievement of the necessary large-scale deployment. Therefore, while implementing green and sustainable projects it is necessary to push the legal boundaries and contribute to the relevant legal requirements in order to achieve predetermined goals oriented towards environment protection and making sustainable economic contribution for relevant stakeholders.

Going into depth of the analysis of regulatory barriers several economic, institutional and even socio-cultural barriers hinder project partner countries from moving from the high to the low emission pathway and have a strong influence on the deployment of renewable energy through citizen energy cooperatives and other forms of citizen energy groups. This is a relatively young area of EU energy policy, which means that additional encouragement from higher legislatures is needed to address the importance of establishing energy communities or similar forms of citizen energy cooperatives/groups, especially in countries with a relatively small number of active ones.

In this context, transnational cooperation with partners from different regions (Pfaffenhofen, Germany) with large number of active citizen energy cooperatives/groups as well as projects initiated by their activities is considered to be a core of the successful implementation of the ENES-CE project.

As is the case with most projects (energy investment projects or projects related to establishment of energy communities and energy citizens' groups), it can be seen that the existing legislative frameworks of the involved project partner countries are still not fully aligned with the European legislative framework which negatively affects the achievement of project indicators. An additional problem lays in the occasional changes in national governments, which means that the relevant regulations are not adopted in time and this affects delays in project implementation. Also, unclear legislation in some project partner countries caused a lot of work and took a lot of time to come to the final conclusions on how the groups/cooperatives would work best. This resulted in mistrust and withdrawal from groups/cooperatives among some locals who showed interest in joining the groups/cooperatives at first project workshops.

As the term energy communities (as well as citizen energy cooperatives/groups) has not yet been harmonized for all EU countries, the meaning of this term is not yet fully understood in some project partner countries, which may negatively affect their establishment in the future. Therefore, it is necessary to further encourage the implementation of pilot projects similar to those within the ENES-CE project led by local governments and through the direct involvement of citizens identify their needs, use their proposals for EE and RES measures in regional strategies and action plans to encourage decision-makers to improve the implementation of the same and with the results affect the creation of new or adaptation of existing regulations and laws.

In addition to all mentioned above, it can be concluded that regulatory barriers are crucial in launching energy projects and citizen energy initiatives because despite remarkable promotion and commitment from various nations, only a small percentage of energy is generated from renewable energy, especially in poorly developed countries.

## LESSONS LEARNED RELATED TO PUBLIC ENGAGEMENT

Public engagement in local energy planning process is essentially a political process and accordingly it should be formalized and conducted in a structured manner so that citizens and other relevant stakeholders are eager to participate because in the end a broad publicity is needed in order to receive good response from citizens. Engaging citizens in shaping and implementing energy policy can be achieved through the cooperation of public authorities, experts and local business leaders by consistently implementing planned steps, coordinating activities and continuously motivating the citizens to further cooperate by using various methods and channels.

> *"Greater citizen engagement is not just about getting the right decision, it's about reconnection between citizens and those in power. It's about challenging some of the cynicism about politics."*

Engaging citizens in energy planning (planning of investments in RES and EE) is a long process, requiring the transfer of knowledge, the demonstration of goals and opportunities, as well as the explanation of economic, technical and environmental dependencies related to the implementation of jointly planned energy investments and the creation of perspectives for cooperation.

Since in many cases citizens and other stakeholders are involved in local energy planning only at the end of the process, i.e., at approval phase of Sustainable Energy and Climate Action Plans this creates an atmosphere of mistrust which makes challenging to implement energy plans in the future. This can only be solved by active involvement of local governments in applying effective engagement mechanisms or developing relevant set of tools which can be used by public authorities in order to increase citizen participation in local energy planning. The project partners were convinced that even with initial skepticism and criticism from citizens /stakeholders in the initial stages of joint planning for RES and EE investments, it is possible to achieve a change of attitude and successive involvement of the citizens in the community through the transfer of expert knowledge and joint analysis of proposals, resulting in joined efforts to achieve common goals. They were also witnessing that building the trust and confidence in the success of the created visions and plans which in the initial lack of knowledge of residents seems to be unrealistic, can be changed with the education and explanation of doubts and questions. At the same time, by showing the first effects of joint work and education of the citizens, it is possible to inspire public confidence in a wider group of inhabitants and stakeholders and encourage them to cooperate in the preparation of projects and obtaining financial support for the implementation of investment measures included in the updated local energy plans.

To launch an effective public engagement process, firstly an acceptance atmosphere through marketing and communication activities should be established. Being aware of the impact of one's effort into a common struggle like the environmental and energy issues, will foster the willing of the individual and hopefully let him/her more likely join a group of sensitized people and act jointly. The lack of joint actions as well as the interest in contributing to sustainable energy issues should encourage local governments to launch activities in order to stimulate the reactivity of the target groups. The core for this to be ensured an important asset can be a newly established planning tools/methods which include co-design and facilitation methods, methods for defining technical, legal and economic aspects of different green projects and communication tools and strategies that can help public officials reach out to their citizens and engage them in energy planning.

An added value within the public engagement can be achieved by collecting inputs from various experts and public in order to exchange ideas and also finding new ideas which are then accepted within the community. The creation of citizen energy groups/cooperatives has proven to be a very good mechanism for involving citizens in energy planning at local level because it allows to introduce a new point of view in the citizens'

way of thinking about the use of the energy or their contribution in the path of the energy transition and their deployment against climate change. In the partner regions where these groups/cooperatives aren't focused on a community investment yet, gives the opportunity to the members to reflect on their own impact on energy and climate goals.

In addition, being a part of the group/cooperative, they get the feeling that they are not alone in the struggle and that actually it is possible to act collectively in order to reach higher aims. While working together in the citizen energy groups/cooperatives, it is important to pursue a common goal. Then all the members in the name of achieving this goal, can to commit themselves strongly and adapt to jointly agreed activities as well as to conditions that change from time to time, which were difficult to predict. Furthermore, the engagement of the citizens on a multilateral point of view, which implies education, economical savings, exponential profits of acting jointly than by on one's own, will starts a virtuous circle for the fulfillment of the actions for energy and climate sustainability and for the environment end economy of the local territory.

In addition, through the implementation of community energy projects, citizen energy groups/cooperatives can be actively involved in investing, for example in joint solar/photovoltaic power plants, in decision-making process and public debates on future energy projects and in the joint implementation of different and new energy services such as energy exchange and energy trading. By using solar energy, members of the groups/cooperatives will become more energy independent and thus help reduce the local community's dependence on fossil resources and by uniting the population in an energy groups/cooperatives, citizens get the opportunity to manage resources in local community and strengthen the local economy.

In the long time period by encouraging the establishment of citizen energy groups/cooperatives the local community actively participates and becomes one of the most important actors and force of the energy transition to a carbon-neutral society. The provisions of the law enable the establishment of the citizen energy groups/cooperatives and their participation in the electricity market as a new actor through which citizens have the opportunity to easily get involved and use a range of services that are in line with EU goals.

### *LESSONS LEARNED WHILE ENGAGING CITIZENS TO JOINT CITIZEN ENERGY GROUPS/COOPERATIVES*

*It takes time and a lot of effort to mobilize citizens to join the citizen energy groups/cooperatives.*

*Well prepared and implemented communication campaign with the rights communication messages can make citizens recognize and understand value of being part of the energy group/cooperative.*

*Examples of successful practices can help to motivate citizens to become more active in their community.*

*In the beginning, the members of the newly established groups/cooperatives need professional support from other organizations that have gone through the establishment and operation of this type of organization.*

One-stop shops on energy efficiency can also serve as an additional element of assistance to local authorities in some regions to encourage public participation. Existence of one-stop shops at regional and municipal level is an additional leverage for local authorities especially for awareness raising and empowering citizens in energy related topics through consultation and information services. In addition, by encouraging debates among citizens about the use of energy in every day's life will lead to highlighting the importance of being aware of any individual contribution and of acting jointly. This in deed can serve as a good environment to encourage citizens to get involved in citizen energy groups/cooperatives.

While planning the pilot action it can be confirmed that being present on streets and in direct contact with people is still the best way for transferring the information and knowledge to the general population especially on complex issues such as energy production, energy savings, renewable energies, etc. When there is a good will and good cooperation between local authorities and citizens, everything is easier to accomplish and conduct.

Finally, for the citizen engagement to be successful the tasks from local governments should always be focused on looking for new opportunities and challenges for a more climate-friendly approach through projects like ENES-CE.

# LESSONS LEARNED RELATED TO TECHNICAL ISSUES

There are a number of legitime technical or technological issues or challenges to the widespread deployment of community energy related investments such as limited availability of infrastructure, inefficient knowledge of operations and maintenance, insufficient research and development initiatives and other technical complexities.

## *ELEMENTS OF SUCCESSFUL PROJECT*

1. *For a project to have a truly effective solutions it should go beyond the technical nature. It is necessary to think beyond implementing technical solutions and adopt a more holistic approach.*
2. *In order for a project to create lasting and sustainable solutions, it is important to include all actors from the outset.*
3. *Smooth implementation of projects requires clear definitions of roles and responsibilities.*
4. *Measurement at all stages of the project is key.*
5. *Taking innovative energy projects to scale requires robust financial mechanisms.*

Launching complex energy investments that require a great deal of technical knowledge is often not well received in the community because common citizens often do not understand how such investments can benefit the community. So before launching such projects their experimental and demonstrative value should be presented to broader public. In addition, emphasizing the total financial and energy savings achieved through the implementation of energy investments will increase the interest of the general public for investing in renewable energy projects in the future. In this regard, effective communication tools and strategies play a major role since they can be used to gain wider public acceptance.

In addition, it is very important to examine the assessment and the expectation of all engaged stakeholders and act in accordance with them. The projects, particularly in the field of energy efficiency and renewable energies which include soft activities intertwined with different investments are in general well accepted by the public and achieve long-term results. Since the implementation of such projects requires enormous amount of in-house and outsourced work and a very good network the involvement of experts with extremely high technical experience are crucial in overcoming all technical issues.

An additional element that can help in overcoming technical challenges is financial planning. Before launching community energy investments especially large ones, it is crucial to keep the hardware, software and service costs under control.

When looking back at the implemented pilot projects within the ENES-CE project, project partners didn't face any bigger technical issues while planning and implementing them. The mentioned projects mainly based on investments as well as projects based on people actions and incentives that have a pilot model character were in general well accepted by citizens in all project partner regions. They actually helped in creating better conditions for understanding the need to take joint action to reduce air pollutant emissions.

# LESSONS LEARNED RELATED TO MANAGING AND FINANCING GREEN INVESTMENTS AND ACTIONS

Today's energy related projects are becoming ever more complicated technically, beginning to involve more people, and beginning to include more integrated components and systems. As the complexity of an individual project increases, so does the importance of project management and financing.

To successfully manage an energy project, the project manager must have a plan by which he or she can direct project activities; the tools to document agreements and project work; the ability to facilitate communication; and the skills to manage the project's technical side (cost and schedule) as well as the project's human side (conflict resolution, team building, and gaining commitment from stakeholders).

The projects dealing with engaging citizens in shaping and implementing energy policy can be only implemented through the cooperation of public authorities, experts and local business leaders by consistently implementing planned steps, coordinating activities and continuously motivating the community to further cooperate by using various methods and channels. This should be reached through good communication, through the regular meetings with the experts who will pass the knowledge about RES and investments with the use of RES and will inspire confidence and belief in the benefits of renewable energy and distributed energy.

Accordingly, well-developed managing and financing activities are a roadmap for successful green investments and actions while reasonable project planning always pays off.

With a lot of conventional project management, in order for project planning to be successful, the high flexibility in working with people is also needed. In addition, the involvement of experts with extremely high technical and project management experience is crucial for success while very low investment budgets could only be compensated by constantly looking for ideas to save costs or make simple approaches without compromising security, consistency and operation later on.

When managing finances of green investments in many cases investors face the problem of insufficient funds. Based on that it can be concluded that one important driver for launching energy related projects especially at local level are the finances. Energy related projects, especially those including investment involve generous energy resources and often local budgets cannot cover the full cost of the investment, so additional sources of funding need to be sought.

This process often demotivates local government employees and hampers the implementation of similar investments in the future. Nevertheless, the sustainability of such investments is in many cases conditional by large extent on the available funding sources which are in the recent years increasing.

When it comes to plan a common activities or investments a good habit is to analyze the needs of the participants of the community because this can be a starting point for the next steps in the implementation and can foster the debate with the target groups to visualize their goals and to stimulate the ideas and the participation in the implementing phase.

Within the ENES-CE project several parameters which can influence the successful implementation of pilot investments and actions in their region were identified.

### *Pilot action implementing parameters*

- *Real needs and goals of municipality/region*
- *Clear pilot action goals and good working plan*
- *Efficiency of the pilot action implementation team.*
- *Open communication and cooperation according to assigned responsibilities among responsible persons*
- *Total investment cost and available timeline*
- *Technical possibilities*
- *Possible funding outside ENES-CE project*
- *Sustainability of investment*
- *Regulatory restrictions*
- *Engagement and acceptance by citizens*
- *Support from political level (local and regional governments)*
- *Life cycle of the investment*
- *Press and other communications cannels*

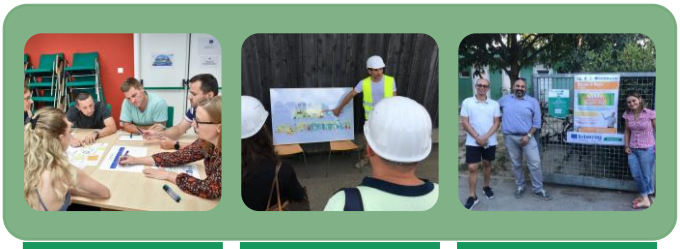
While implementing pilot investments and actions the ENES-CE project partners stated that the implementation of pilot investments and actions in their regions was most influenced by the following parameters: real need and goals of municipality/region, clear pilot action goals and good working plan and open communication and cooperation according to assigned responsibilities among responsible persons and support from political level (local and regional governments). In bottom line, while the implementation of pilot project actions and investments was carried out, it could be seen that its success largely depends on the good cooperation between cluster members, engagement of citizens, public and private entities and their involvement in activities. Finally, with know-how, flexibility, a good technical network and a very high level of personal commitment on the part of those involved, the problems and the very low investment budget could be compensated to satisfying extent.

One of the main lessons learned related to managing and financing green investments and actions is that taking part in the process of implementing and managing project pilots each included project partner and stakeholder was provided by an opportunity to develop cooperation skills among the groups concerned, as well as to transfer knowledge between different sectors and institutions. The most important result was the creation of a network of contacts and a common goal, which the actors were able to promote through different means.

## LESSONS LEARNED RELATED TO USING ENES-CE PARTICIPATIVE TOOLS FOR CITIZEN ENGAGEMENT

The whole concept of engaging citizens in local energy planning entails the need to apply existing or develop new and effective mechanisms for active citizen engagement. One of the positive results achieved by the implementation of ENES-CE project lies in the fact that the project partners have developed a set of tools (toolbox set) that will help local governments to increase citizen participation in local energy planning at the very starting point of the planning process.

This ensured better local acceptance of energy strategies and plans and enabled the citizens to actively participate in developing and implementing the energy action plans.



| Co-desing workshop methods for engaging participants into local energy planning | Community energy investment guidelines - technical, business and legal aspects | Communication methods for local energy plans and creating an atmosphere of acceptance |
|---|---|---|

The tool Co-design workshop methods for engaging participants into local energy planning proved to be a very useful tool in organizing interactive and collaborative workshops where the participants were relaxed enough to share their ideas, opinions and problems and thus contribute to the development of local energy plans and select the pilot investments and actions implemented in the frame of ENES-CE project. For the participants to be active during the workshops organized within the project the usage of different visualization exercises facilitated the exchange of ideas between citizens and public officials and allowed citizens to have a stronger voice in shaping their local energy strategy.

For workshops to be successful it was also necessary to reach to as many stakeholders as possible through the available communication channels and engagement of all participants in the discussion on the future renewable energy investments with the support of the external experts, energy advisors and other persons as well as with entrepreneurs who are respected in the community. The success of the mentioned workshops is also conditioned by high participation, active engagement and open cooperation of the local authorities especially in the planning phase of pilot investments/actions with citizens and other stakeholders including experts.

The usage of the tool – Community energy investment guidelines - technical, business and legal aspects has proved to be successful in selecting pilot investments implemented in the project partner regions. Although the tool is considered to be very useful, it is quite complex (a lot of background tasks were done to make the tool so extensive and high quality) where it is necessary to know a lot of input data, especially technical ones, which can be a problem for someone who is not professional enough. Another downside of the tool is related to its orientation towards large investment projects that provide long-term benefits to the community (for large production plants), but require significant financial resources for the implementation. When using such complex tools, it is certainly important to include relevant experts who will explain to people who do not have enough technical knowledge in simple language what its functionalities are and how it will help in meeting their needs. The usage of this tool resulted in the conclusion that the tools intended for use by various stakeholders with different level of knowledge should be simplified since the complexity of the tool negatively affects the perception of end users in its usefulness.

For green projects or initiatives to be well accepted among target groups it is essential to develop and apply quality communication methods which are tailored to the relevant target groups. In addition, quality communication methods are beneficial for setting the ground for future energy community investments and projects with focus on green energy and sustainable development beyond ENES-CE project by raising awareness among citizens and other interested stakeholders. It is also necessary to take into account the new trends in communication and extensive usage of social networks and adjust the current communication activities accordingly.


Map with ENES-CE included project partner countries from Central Europe with main problems identified

Interreg CENTRAL EUROPE ENES-CE

https://www.interreg-central.eu/Content.Node/ENES-CE.html

*Community energy projects can bring substantial benefits to the communities involved, as well as broader benefits to society. Yet much more investment is needed to realize community energy's full potential. By removing the regulatory, financial and institutional barriers that continue to hinder investments, more communities can contribute to the energy transition (IRENA Coalition for Action, 2018).*

## POLICY RECOMMENDATIONS FOR CREATING A MORE STIMULATIVE ENERGY FOCUSED COMMUNITY

WITH INCREASEMENT OF ENERGY PRICES, INCREASING USE OF RENEWABLE ENERGY (RE) SOURCES, CLIMATE CHALLENGES AND THE ENERGY TRANSITION IN GENERAL, THE TOPIC ON COMMUNITY ENERGY HAS BECOME POPULAR AS ONE OF THE POSSIBLE AND BENEFICIAL ACTIONS WITH AN ADDED-VALUE TO ACHIEVE CLIMATE GOALS.
ALTHOUGH THE PRODUCTION, USE AND STORAGE OF ENERGY BY CITIZENS AND COMMUNITIES HAS BEEN PRACTICED IN MANY EU COUNTRIES FOR YEARS, IN SOME REGIONS EVEN DECADES, COMMUNITY ENERGY IN THE CENTRAL EUROPEAN COUNTRIES IS A RELATIVELY NEW TOPIC. AT THE SAME TIME, THE DEVELOPMENT OF ENERGY COMMUNITIES AND THE OVERALL NEED FOR CLEANER ENERGY HAVE COME TO A POINT WHERE DECENTRALIZATION AND GREATER INDEPENDENCE IN ENERGY PRODUCTION ARE SLOWLY BUT SURELY GAINING POPULARITY EVEN WHILE COLLIDING WITH OBSTACLES AND RESTRICTIONS IN THE EXISTING LEGAL FRAMEWORK. THIS PROMPTED THE NEED TO DEFINE SOME POLICY RECOMMENDATIONS BASED ON BOTH THEORETICAL AND PRACTICAL EXPERIENCE OF PROJECT PARTNERS TO CREATE A MORE STIMULATIVE ENERGY FOCUSED COMMUNITY.
THESE RECOMMENDATIONS ARE TARGETING MAINLY THE INSTITUTIONS RESPONSIBLE FOR NATIONAL AND REGIONAL ENERGY PLANNING AND SHOULD ALSO BE ADDRESSED BY THE HIGHEST REGULATORY BODIES AT EU LEVEL. THIS INCLUDES NATIONAL MINISTRIES, REGIONAL AUTHORITIES AND PUBLIC OFFICERS RESPONSIBLE FOR ENERGY ISSUES AS WELL AS EU GOVERNMENT AUTHORITIES AND AGENCIES.

The importance of citizen-based activities, such as implementation of pilot actions and the establishment of a citizen energy groups/cooperatives are fundamental for a fruitful implementation of the SECAP actions. It allows to connect the citizens to the local stakeholders and to the public authority in a trustworthy ambiance.

Furthermore, the engagement of the citizens on a multilateral point of view, which implies education, economical savings, exponential profits of acting jointly than by on one's own, will starts a virtuous circle for the fulfillment of the actions for the energy and climate sustainability and for the environment end economy of the local territory.

Good policy recommendations can help in fostering further friendly environment for establishment of citizen energy groups/cooperatives and implementing SECAPs and other local energy plans. Accordingly, the overall purpose of policy recommendations defined within this document is to stimulate the further development of local and/or regional energy plans with high citizen engagement and support the creation of energy focused communities with an emphasis on renewable energy sources.

The policy recommendations should enable national and regional governments to derive concrete measures and supporting actions to take in order to improve the situation for energy community development in respective countries or regions as well as point out and propose solutions for existing barriers or lags in the national or regional policy framework, i.e., alleviate existing barriers and make the policy framework more favorable to launch community energy projects and actions and should stimulate the further development of and support for the utilization of renewable energy and thereby contributing to national and EU energy targets.

## GENERAL POLICY RECOMMENDATIONS ON EU LEVEL

Energy focused communities are the initiators of collective and citizen-driven energy actions that help pave the way for a clean energy transition, while moving citizens to the fore. They contribute to increasing public acceptance of renewable energy projects and make it easier to attract private investments in the clean energy transition. At the same time, they have the potential to provide direct benefits to citizens by increasing energy

efficiency, lowering their electricity bills and creating local job opportunities.

Being a part of such initiatives, it is easier for the citizens, together with other market players, to team up and jointly invest in energy assets. This in turn, helps contribute to a more decarbonized and flexible national energy systems, as the energy communities can act as one entity and access all suitable energy markets, on a level-playing field with other market actors.

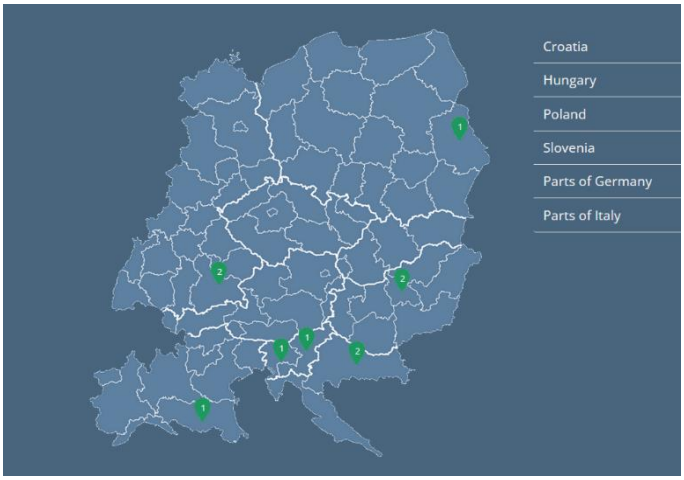
This should be a main driver for EU policy makers for creating new or shaping existing legal framework which is in favor of creating a more energy focused communities.

Accordingly, in order to provide support or initiate the creation of more energy focused communities or even launch community energy projects (small- and large-scale projects) it is necessary to create more stable EU policy framework for such initiatives or projects and ensure easy access to preferential funding opportunities at early stages (additional technical support, providing specialist consultancy services, etc.). In addition, it is crucial to emphasis the leading role of regional governments in establishing an energy community and supporting existing communities to establish common energy infrastructure. Their role should also include providing expertise, advice and financing, as well as ensuring that regulatory issues can be easily understood and navigated.

## POLICY RECOMMENDATIONS ON INCLUDED ENES-CE PROJECT PARTNER COUNTRIES

In the process of preparing the ENES-CE project idea project partners from different Central Europe countries recognized several problems which needed to be addressed and solved during the project implementation phase: existence of many challenges for local authorities in implementing Sustainable Energy and Climate Action Plans and other local energy plans, top down approach for local energy governance which is characterized by low citizen engagement, citizen involvement only at the very end of local energy planning process and lack of quality citizen engagement models. Everything above mentioned creates an atmosphere of mistrust that makes it challenging to implement the community energy projects in the future and prevents deeper engagement of citizens and their inclusion in energy communities.

In order to define common activities and community relevant investments a good habit of national authorities should foster the implementation of analyzes of the needs of all the participants in communities which can be implemented through surveys, questionnaires or a canvas-discussions. The findings then can be used as starting point for the next steps and foster a further debate at national level.




Thanks to the transnational cooperation the more experienced partners managed to transfer their knowledge in working with and creating energy communities to less experienced partners. In addition, all the barriers which prevented the creation of citizen energy cooperatives and other forms of citizen energy groups in project partner regions influenced the creation of policy recommendations for different project partner countries. The policy recommendations for six included countries are elaborated in the next sections of the document.

## CROATIA

THROUGH THE PARTICIPATION IN THE ENES-CE PROJECT CROATIAN PROJECT PARTNERS HAVE LEARNED HOW TO MOTIVATE CITIZENS TO GET ACTIVLY INVOLVED IN THE COMMUNITY AND HOW TO MAKE A DIFFERENCE IN ENERGY RELATED TOPICS AT MUNICIPAL LEVEL. ESTABLISHMENT OF CITIZEN ENERGY GROUP “GREEN ENERGY CLUB PRELOG” HAD A POSTITIVE IMPACT ON CITIZENS’ AWARENESS ON THE IMPORTANCE OF DEVELOPING LOCAL ENERGY STRATEGIES AND PLANS AND LAUNCHING ENERGY RELATED PROJECT AND INITIATIVES.

NEWLY ESTABLISHED CITIZEN ENERGY GROUP IS NOW OPEN FOR ANYONE TO JOIN WHO HAS THE INTEREST IN SUSTAINABLE DEVELOPMENT, DEVELOPMENT AND IMPLEMENTATION OF ENERGY AND CLIMATE PROJECTS, ENVIRONMENTAL PROTECTION AND COOPERATION WITH OTHER SIMILAR ORGANIZATIONS. CROATIAN PARTNERS HAVE BEEN SUPPORTING THE ESTABLISHMENT OF THE ASSOCIATION FROM THE BEGINNING AND WILL DO SO THROUGH THE COURSE OF ITS ACTIONS IN THE FUTURE.

The European Union's comprehensive energy policy is made up of a series of individual strategies integrated into a comprehensive energy and climate package. The Republic of Croatia, as a full member of the EU, is obliged to ensure technically and cost-optimal transition, taking in mind the maximum benefit for the whole society; energy, economic and environmental. Energy transition is developing a rapidly fast so the laws and regulations as well as available technologies are not the only factors that are changing. Croatian energy sector is known by high capital investments in the energy projects (PV power plants and other infrastructure) which entails the financial problems, i.e., seeking additional funds in launching such investments for public and private investors (including the citizens). There is a huge potential of citizens and local communities in Croatia to move forward the transition to renewable energy, as well as the potential of decentralized energy to stimulate local development. This potential remains largely untapped, and development of the renewable energy is mainly in the hands of individual large private and state-owned companies.

Having this in mind national authorities need to further strive to encourage the creation of energy communities in order to organize collective and citizen-driven energy actions that help pave the way for launching renewable energy projects in order to boost a clean energy transition at local and regional level.

There is no guarantee for unlimited and sustainable energy supply due to the extreme unpredictability and variability of energy prices and energy consumption. This requires development of clear strategic guidelines which will encourage better citizen engagement in energy communities, which will bring innovation into the sector that has been stagnating in Croatia and utilize small scale solar projects to deliver multiple benefits for local communities: cutting energy costs in households, bringing new skills and jobs, enabling faster energy transition. This will additionally lead to economic growth and energy development at national level.

In Croatia, adaptation of the EU concepts of energy communities could support implementation of local project by:

> encouraging local energy trading or sharing via the public grid between the community members,

> specifying the options for the attribution of self-generated energy (in addition to currently available prosumer schemes),

> introducing virtual net metering schemes,

> promoting the integration of several actors (producers, consumers, and investors) under one umbrella of an energy communities through pilot projects, promotional activities, and tailor-made tenders to accelerate investment, energy generation and energy sharing schemes.

Through the recently adopted law in Croatia, the citizen energy groups are a new term which refers to a legal entity based on voluntary and open participation and it is under the control of members or shareholders who can be citizens, local authorities, municipalities, or small businesses. Primary purpose of this groups is to provide environmental, economic or social benefits to its members or shareholders and local areas on its field of activity and not to generate financial gain. The main problem in Croatia which prevents the development of energy cooperatives is a lack of positive and steady policy environment for community energy so the national governments should dedicate their work to develop and test innovative business approaches and showcase how citizens and local communities can play an integral role in the energy market since there is a huge potential for the participation of energy communities in Croatia in electricity generation and supply, collective self-consumption, demand flexibility, data management, etc.

All the newly established citizen energy groups/ cooperatives should rely their work on social innovation and new technologies to encourage systematic changes, ecosystem development in collaboration with various

groups of stakeholders, and collaborate with local authorities to help create resilient cities and municipalities and finally encourage citizens to actively participate in designing tools, services, policy recommendations and gain necessary knowledge on solar and other renewable energy technologies and entrepreneurial skills to unlock alternative finance opportunities.

In bottom line, the motivation of citizens should be tackled by additional investments in the communication and education of citizens. Local governments as direct link to citizens are already communicating with them as part of their activities, but this differs in quality. Accordingly, to organize citizen engagement on municipal level, a development of municipal communication strategy is needed.

## GERMANY

THE INTERACTION OF VERY ACTIVE STAKEHOLDERS IN PFAFFENHOFEN, INCLUDING THE WORK AND IMPULSES OF THE PAF CITIZENS' ENERGY COOPERATIVE AND THE MUNICIPAL UTILITIES IN PFAFFENHOFEN, HAVE MADE IMPORTANT CONTRIBUTIONS TO ACTIVELY INTEGRATING CITIZENS AND CREATING A NEW SECAP. 10 MEASURABLE CONCEPTS WERE DEVELOPED, WHICH CAN ALSO SERVE AS IMPULSES, IF NECESSARY, SO THAT A COMMON EU POLICY CAN ALSO BE INCORPORATED.

The final energy consumption of the city of Pfaffenhofen amounted to around 567 GWh in 2018. Of this, the "Private households" sector accounted for 40% (224 GWh), the "Trade, commerce and services " sector for 27% (151 GWh) and to the "manufacturing sector (industry)" 10% (55 GWh). The transport sector also had also accounted for 24% (136 GWh) of total final energy consumption.

GHG emissions resulting from the use of electricity, which are calculated using the local electricity mix, account for a good are responsible for a good fifth of total emissions (20%; 26 thousand metric tons $CO_2$ eq) across all sectors are responsible - due to the high share of renewable energies in Pfaffenhofen.

In 2018, renewable energies already cover 66% of the total electricity demand (114,000 MWh). The city of Pfaffenhofen has already prepared an Integrated Climate Protection Concept (Climate Protection Concept 1.0) in 2012, in which goals, strategies and measures as well as an action plan for the period 2013 - 2017 were developed. The citizen energy cooperation (BEG) plays a central role within the stakeholder in the city and district. It´s project development competences are among other elements a key success factor.The goals set at that time and adopted by the city council intended to reduce $CO_2$ emissions (here to be understood as $CO_2$ equivalents) per inhabitant to 5.1 t $CO_2$-equ / capita by 2018 and even to 3.0 t $CO_2$-equ / capita by 2030 (based on a starting value of 7.2 t $CO_2$-equ / capita in 2010). According to local mix, even 2.1 tons per capita were reduced during this period. This is due to the more climate-friendly mix of energy sources used.

*Taking energy supply into your own hands, BEG Pfaffenhofen*

Preparing the city's new climate protection concept the city council of Pfaffenhofen (27.000 inhabitants) decided that the target years of the federal government and the state were considered too unambitious against the background of the lack of Paris conformity. Instead, the city would like to go ahead and try to have no GHG emissions within the city limits as early as 2035 (Germany: 2045). The electricity supply is to be covered by 100% renewable energy as early as 2030.

The local policy and therefore the EU could be addresses ten concepts, which are also central measures are pursued:

- Development of an energy competence center;
- Pfaffenhofens climate protection fund;
- Renovation roadmap for the city;
- Heat atlas;
- One-stop-shop for energy-related renovations;
- District heating expansion strategy;
- Potential study of natural gas networks;
- Municipal investments in local power plants;
- Climate protection check for municipal decisions;
- Creation and implementation of a strategy for active mobility.

*Citizen energy engagement and energy policy works for the present and the future of our children!*

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# HUNGARY

AS IN HUNGARY THE LEGISLATIVE FRAMEWORK AND EXPERIENCES WITH ENERGY COMMUNITIES ARE WEAK, PARTICIPATING IN ENES-CE PROJECT LET US GET IMPORTANT INFORMATION AND PRACTICES ON THIS TOPIC, AS MOST OF THE OTHER PARTICIPATING COUNTRIES ARE FORERUNNERS COMPARED TO US. DURING THE IMPLEMENTATION THE HUNGARIAN PILOT, THE TEAM GAINED VALUABLE EXPERIENCES THAT SHOULD BE USEFUL FOR OTHER MUNICIPALITIES AND COMMUNITIES AS WELL. PROFESSIONAL AND LEGAL KNOWLEDGE WAS SIGNIFICANTLY AMENDED VIA THE TARGETED EVENTS.

Due to the slowly developing community energy legislation in Hungary, Hungarian pilot met several barriers. The legislative framework was only set up in 2021 and for only renewable electricity (production and consumption). Based on existing experiences, several recommendations can be suggested both at the national and the local levels. Unfortunately, the artificially low energy prices (overhead) in Hungary worsen the rate of return on renewable energy investments and are a significant disadvantage in terms of their viability, especially when creating energy communities that need extra costs. Therefore, energy experts in Hungary give recommendations to policy makers that can help making energy communities more feasible, such as VAT-free energy trading or reduced system-usage fees for energy community members.

Regarding the national framework, following recommendations can be made:

> Suitable definition of energy community and the renewable energy community, as they are currently only partially complying with the relevant EU directives.

> Scope of members and the appropriate delimitation of governance rights should be amended as they are key to support truly local initiatives.

> The definition/legislation should have to be extended to all renewable resources and energy sources, including biogas and renewable (district) heat and also the energy efficiency.

> An integrated and targeted financial supporting policy will be indispensable, fit to the specificities of diverse bottom-up initiatives.

> Standardized guidance and training for local authorities and other possible EC members to build their capacities to form energy communities – e.g., via a non-profit energy agency.

> Reduced system-usage fees for EC-s and the better-defined possibilities of sharing the produced electricity would also significantly support the spread of energy communities.

> VAT-free energy trading between energy community members can help the viability of communities. The cooperating community in Hungary may offer an alternative legal option for VAT-free electricity trading within a renewable energy community.

More information on national language is available at: https://mtvsz.hu/uploads/files/Megujuloenergia-kozossegek_Ertekelo_tanulmany_MTVSZ-SZGK-EMLA_final.pdf

Parallel to the demolition of the national bottlenecks, some developments at the local level, would be also important:

> Community developers, engagement experts can significantly support the establishment of local citizen energy groups so such experts should be employed/involved.

> Local authorities generally lack capacities to coordinate different stakeholders although they are the most appropriate actors to do so. Their substitutes can be civil organizations/groups that should have been taken to consideration and been supported.

> Bureaucratic and inflexible operation can almost completely prevent the birth of energy communities, so local authorities should have to be more flexible and effective in terms of managing such projects.

> Open communication and wide engagement in planning and decision-making processes help to build trust that is indispensable for an energy community.

> Local enterprises can also be involved, after building an animated relationship with them.

> Local patriotism, community belonging and social responsibility can motivate individuals and communities to cooperate but these potentials should have been actively exploited.

## ITALY

THE ENGAGEMENT OF THE TERRITORY OF THE CITY OF FORLÌ IN THE ENES-CE PROJECT GAVE A LARGE BREADTH TO THE ISSUE OF THE RATIONAL USE OF THE ENERGY, ESPECIALLY LOOKING AT WHAT THE OTHER PARTNER MUNICIPALITIES ARE WORKING AT AND AT WHAT KIND OF GOALS ARE ACHIEVING. FOCUSING THE INTEREST ON THE ENERGY COMMUNITIES, RIGHT WHILE THE ITALIAN REGULATION IS ADOPTING AND IMPLEMENTING THE EU RENEWABLE ENERGY DIRECTIVES AT A NATIONAL LEVEL GAVE THE OPPORTUNITY TO BETTER ADAPT TO THE NEW RULES AND TO HELP THE CITIZENS IN GETTING INTO SUCH A NEW PERSPECTIVE. THE ESTABLISHMENT OF A CONSUMER ENERGY GROUP AND THE ACTIVITIES OF THE PILOT ACTION HAD THE ADDITIONAL POWER TO GET THE ATTENTION OF A PART OF THE POPULATION AND TO FULFILL SOME EFFECTIVE INFORMATIVE OPERATIONS.

The creation of a Renewable Energy Community (REC) in Italy is legally feasible only since 2021, and started with a temporary regulation which, on one hand strictly limits the dimension of the community, and on the other is obstacle by the detention of certain necessary information by some economical operators, which slowed the process of creation of new RECs.

Nowadays, the main law evolved and larger communities are foreseen, but the Implementational decrees are still missing. Within the new limits, many strong economical actors have field to operate with interesting offers and there's the risk that the right for the consumer to change his or her operator clashes with the sustainability of the creation of an Energy Community.

The only Energy Communities considered by the law are the electric connected ones, while no word is spent for the use of thermal energy in a district heating net, which could be an interesting application too.

It would be very useful a national guideline for implementing the Renewable Energy Communities, collecting several examples of organizations' statutes and methods to divide incentives and incomes among the participants.

As regards the issue of incentives, in the last years, in Italy were assured strong incentives for energy requalification of buildings, but the regulation changed many times and quickly letting the activities become very unsure from an economical point of view.

In parallel, the issue of the energy refurbishment, has not persuaded the world of the banks yet, since it is very difficult to obtain credit to start the works, even if the internal rate of return of such type of intervention is usually quite high.

## POLAND

IN POLAND, IN ACCORDANCE WITH THE ACT ON RENEWABLE ENERGY SOURCES OF 20.02.2015, CITIZENS ENERGY GROUPS CAN BE CREATED ON THE BASIS OF ACCEPTABLE LEGAL FORMS SUCH AS AN ENERGY CLUSTER OR AN ENERGY COOPERATIVE. BY CREATING A CITIZEN ENERGY GROUP IN THE MUNICIPALITY OF NIEMCE IN THE LUBELSKIE VOIVODESHIP IN POLAND, THE ENERGY CLUSTER FORMULA WAS SELECTED AS LESS COMPLICATED IN LEGAL TERMS TO INITIATE COOPERATION OF THE LOCAL ENERGY SAVING COMMUNITY IN ORDER TO JOINTLY PLAN AND IMPLEMENT INVESTMENTS FOR USE RENEWABLE ENERGY SOURCES.

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In Poland, in order to liberalize the energy market, the draft amendments to the RES Act and the Energy Law Act are currently being consulted in order to adapt the national regulations to the so-called Red II directive.

The draft amendments to the acts provide, among others:

> introducing the concept of citizens energy communities, which could have the following legal forms; cooperative, association (excluding ordinary association), partnership (excluding professional partnership) or limited liability company;

> creating clear rules necessary for energy clusters to appear on a larger scale on the energy market.

The proposed solutions promote the functioning of energy clusters. It will also allow the professionalization of the activities of the energy communities themselves

and the identification of further development barriers. In the proposed changes, the objective scope of the energy cluster's activity has been completed with energy storage. The aims of the cluster's functioning, are economic, social or environmental benefits to the sides of the agreement or to increase the flexibility of the power system, have also been added.

The draft of changes introduces a register of energy clusters, which will be kept by the President of the Energy Regulatory Office, in electronic form. The energy cluster coordinator, will be obliged to prepare an annual report containing, data on the amount of energy generated by the parties to the energy cluster agreement, including the amount of energy generated from renewable energy sources, the total installed capacity of installations belonging to the members of the energy cluster, as well as information on concluded and terminated agreements in the area of peak load reduction between members of the energy cluster and the appropriate operator of the distribution system. The draft also introduces proposed regulations containing the principles of cooperation with the operator of the electricity distribution network.

The proposed legal regulations are designed to prepare energy clusters for fully professional functioning on the changing energy market. The proposed amendments to legal regulations are good recommendations and will be an impulse to create new business models for the functioning of energy clusters in Poland. In addition, the planned changes to the RES Act and the Energy Law Act are in line with the applicable regulations contained in documents such as:

> Poland's energy policy until 2040, adopted by the Council of Ministers on 02.02.20221, announced on 02.03.2021 (M.P. 2021 item 264);

> National Plan for Energy and Climate for 2021-2030 adopted by the Committee for European Affairs acting on behalf of the Council of Ministers on 18.12.2019;

> Strategy for Responsible Development until 2020 (with a perspective until 2030) of February 14, 2017 (M.P. 2017 item 260), where, Poland's energy policy provides for the development of, among others, distributed energy based on renewable energy production, sale, storage or participation in DSR programs by individual entities (e.g., active consumers, renewable energy prosumers and others) and energy communities (e.g., energy clusters, energy cooperatives).

By 2030, an approx. 5-fold increase in the number of prosumers and an increase in the number of energy sustainable areas at the local level to 300 is expected.

In addition, the National Energy and Climate Plan contains recommendations for the development of distributed energy, which include, among others, that ultimately the energy cluster formula is to be the basic form of developing distributed energy from renewable energy sources in the sector of medium and partially large installations (selected technologies).

The Strategy for Responsible Development until 2020 also emphasizes that it is important to use the synergy effect between various technologies, for example by combining thermal modernization with the use of high-efficiency cogeneration, both in order to develop innovative economy, improve energy efficiency and develop technology. and renewable energy sources, development of energy clusters, energy cooperatives, etc., or replacement of lighting with LED.

## SLOVENIA

MORE AND MORE INDIVIDUALS AND COMMUNITIES AROUND THE WORLD, ARE RECOGNIZING THE POWER OF INTEGRATION FOR COMMON WELL-BEING. IN SLOVENIA COMMUNITY PROJECTS ARE A NOVELTY. THE ENES-CE PROJECT REPRESENTS AN IMPORTANT STARTING POINT FOR COMMUNITY PROJECTS IN THE FIELD OF SOLAR ENERGY IN SLOVENIA. THE MUNICIPALITY OF KOPER HAS DONE A LOT OF WORK AS PART OF THE ENES-CE PROJECT, BY SETTING THE FOUNDATIONS FOR THE ESTABLISHMENT OF A SOLAR ENERGY COOPERATIVE. A SPECIAL BUSINESS MODEL WAS PREPARED. NEWLY ESTABLISHED SOLAR COOPERATIVE WILL OFFER THE POSSIBILITY OF GENERATING ITS OWN ELECTRICITY FORM THE SUN FOR INDIVIDUALS WHO DO NOT HAVE APPROPRIATE ROOF TO SET UP A SOLAR POWER PLANT OR CANNOT INVEST FINANCIALLY IN THEIR OWN SOLAR POWER PLANT.

The measure of self-sufficiency in electricity from renewable energy sources has been implemented in Slovenia since 2016, on the basis of the Energy Act and on the basis of the issued Decree on self-sufficiency in electricity from renewable energy sources. Due to EU legislation, the field of self-sufficiency was newly comprehensively regulated by the Act on promotion the use of renewable energy sources, which entered into force on 7th of August 2021. The purpose of the new act is to harmonize the national acquis with EU law.

*Slovenia is a country rich in natural resources, so our energy can be local, clean, accessible and independent of large energy producers. Sun, wind and water belong to all of us. Community energy projects are an opportunity to collaborate, share natural resources and decide on our own energy future.*

New regulation brings advantages from the point of view of connecting to a cooperative - households that are not at the same transformer station can connect.

While under the old legislation energy cooperative can connect individuals that are connected to the same transformer station as the solar power plant. Implementation of a new regulation on self-sufficiency is still on ongoing process Until 23rd of December 2023 it is possible to set up cooperative under a new or old legislation.

For electricity customers, the rules according old legislation are currently more favorable, which enables the billing of electricity on an annual basis, while the new law provides for billing on a monthly level.

Under old legislation there are no size restrictions for the installation of solar power for community self-sufficiency - the actual power of the solar power plant depends on the technical possibilities or capacity, both the network and the building on which the device will be placed.

Under the old legislation, only household and small business customers can be connected to the renewable energy community - these are low-voltage customers who are not household customers and have a connected power of less than 43 KW.

According to the Slovenian Cooperatives Act, a cooperative can be established by at least three founders. The founders can be individuals or legal persons. Public institution (e.g., school, public institution for culture) may not become a member of cooperative, while municipality may become, but public interest must be shown.

## CONCLUSION

Energy communities of any kind can bring numerous benefits to its members. Economically, they create employment opportunities and local value by revitalizing the local economy and increase the security of supply. Environmentally, the local energy production aims at reducing greenhouse gases emissions and thus prevent air pollution. And socially, energy communities promote education regarding energy saving and efficiency, foster energy autonomy, create energy democracy (e.g., with the cooperative principle one member-one vote), energy justice by addressing the energy poverty (which can be ensured by affordable energy for all consumers), and they can also build up social cohesion and trust.

This variety of benefits, on top of the development of sustainable energy technologies, can also favor the change toward the decentralization of the energy network.

***Citizen energy groups/cooperatives should be organized in a democratic and transparent way where it is important to integrate group/cooperative values and principles in all of their activities, driven by positive change and impact!***

The creation of citizen energy groups/cooperatives within the ENES-CE project contributed to increasing public acceptance of renewable energy projects and in the future will help in attracting private investments at local level. At the same time, it can be concluded that by acting together, citizens will have the potential to provide direct benefits for themselves by increasing energy efficiency, lowering electricity bills and creating local job opportunities.

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In the frame of ENES-CE project, citizens had different reasons to join the groups/cooperatives, but they all share similar traits - all of them are already active in various fields of civil work (members of different associations, employees of public institutions, etc.) and On the other hand, they see this as a great opportunity to handle more challenging activities such as installations of new power plants or implementation of urban housing construction standards for future development.

Established citizen energy groups/cooperatives in targeted regions will in the future help to empower local communities through the utilization of local resources and also encourage citizens to become and feel more in control, produce and consume their own energy, and make a positive impact in terms of environment, climate change, local economy, resilience, etc.


Based on all the lessons learned, it can also be concluded that a positive and steady policy environment for community energy is an important factor for the development of citizen energy groups/cooperatives in targeted countries. Engagement of citizens in local energy planning through establishment and operation of

citizen energy groups/cooperatives will in the future help citizens to team up with other market players and jointly invest in energy assets.

The established citizen energy groups/cooperatives within ENES-CE project will need to further engage themselves in launching concrete community energy projects and by doing so use the available energy community initiatives such as Energy Communities Repository and Rural Energy Community Advisory Hub, both launched in 2022. The objective of the Energy Communities Repository is to assist local actors and citizens willing to set up a Citizens Energy Community or a Renewable Energy Community in urban areas through technical and administrative advice, and encourage their development. The Rural Energy Community Advisory Hub focus on assisting citizens, rural actors and local authorities in setting up a Citizen Energy Community or Renewable Energy Community in rural areas through technical and administrative advice, and encourage their development.

want to reduce the costs of energy bills in order to save money. Furthermore, on one hand some of the citizens wanted to tackle community aspects and build social impact and learn more about energy topics.


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