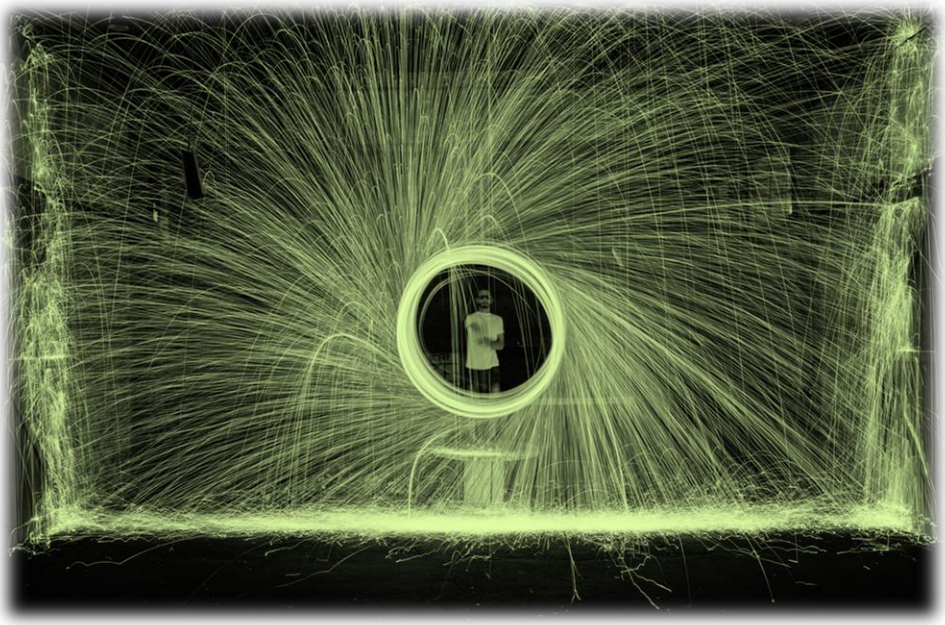
Summary report for the

"**Risk management in decarbonisation planning & Resilient transitions through energy citizenship**" workshop



DeCarb Activity A4: Thematic session 2

Prepared by AGENEX

October 2022

Table of contents

TABLE OF CONTENTS **2**

EXECUTIVE SUMMARY **3**

1 INTRODUCTION **4**

1.1 OVERVIEW OF THE DECARB A4 4

1.2 DECARB PARTNERS OF COVID-19 EXTENDED ACTIVITIES 4

1.3 DECARB A4 WORKSHOP 5

2 RESILIENT TRANSITIONS THROUGH ENERGY CITIZENSHIP **8**

2.1 CONCEPT OF ENERGY CITIZENSHIP 8

2.2 EU POLICIES AND INITIATIVES FOR ENERGY COMMUNITIES 9

2.3 ENERGY CITIZENSHIP IMPACTS 9

3 GOOD IMPLEMENTATION CASES AND/OR PRACTICES THAT SUPPORT "RESILIENT TRANSITIONS THROUGH ENERGY CITIZENSHIP" IN DECARB REGIONS **12**

4 PEER REVIEW ANALYSIS OF THE GOOD PRACTICES RELATED TO RESILIENT TRANSITIONS THROUGH ENERGY CITIZENSHIP **34**

5 SUMMARY OF KEY POINTS AND LESSONS LEARNT **36**

ANNEX A TABLE OF PEER REVIEW RESULTS **39**

ANNEX B LIST OF PARTICIPANTS AND PHOTOS OF THE SECOND THEMATIC SESSION **42**

ANNEX C PHOTOS OF THE VISITS OF THE SECOND DAY OF THE WORKSHOP **45**

Executive summary

This “lessons learnt” report aims to present the conclusions drawn from the second main theme of the “Risk management in decarbonisation planning and resilient transition through energy citizenship” workshop conducted as part of DeCarb activity A4. Specifically, the “Resilient transitions through energy citizenship” theme of the workshop focused on highlighting measures and good practices that could strengthen partners’ efforts to make existing governance models more resilient towards a future crisis and integrate energy citizenship approaches.

The report presents the topics regarding the context of the activity (Section 1), the thematic background and basic definitions (Section 2), a number of relevant good practices presented during the workshop (Section 3), the peer review process on the practices that participants performed (Section 4) and the lessons learnt (Section 5).

1 Introduction

1.1 Overview of the DeCarb A4

This deliverable is part of the activity A4 of the DeCarb Interreg Europe project, which is titled "Risk management in decarbonisation planning and resilient transition through energy citizenship". More specifically, this report summarises the second thematic session of the first day of the 2-day on-site workshop jointly organised by two of the DeCarb partners (AGENEX and KSSENA).

During the first day of the workshop, the two thematic sessions: a) Risk management in decarbonisation planning, and b) Resilient transition through energy citizenship were presented and discussed, following the presentation of good governance practices from partners' regions.

For the first thematic session, the presented good practices aimed to integrate risk management and mitigation tools (e.g. climate risk assessment, risk governance models) assisting transition planning, and elaborate on how to design and integrate relevant measures to shield coal phase-out from external crises. For the second thematic session, the presented good practices showed how citizens could participate in regional energy planning ensuring a wider consensus for coal phase-out/decarbonisation.

To conclude the first day of the workshop, partners drew from these good practices to discuss how to make existing governance models more resilient towards a future crisis, integrating energy citizenship approaches, and conclude with specific participatory models to be transferred to their regions.

During the second day, the participants attended "Welcome, Future 2022 Conference", as a back-to-back visit, which was held on the 21st of September in the city of Velenje. Then, the organisers had arranged visits for all participants to the oldest mine in Velenje, the Coal Mining Museum of Slovenia, and the Šaleška Lakes.

1.2 DeCarb partners of COVID-19 extended activities

Country	Partner organization
	Stara Zagora Regional Economic Development Agency (SZ REDA), Stara Zagora Province, Bulgaria (LP)
	ENEREA Észak-Alföld Regional Energy Agency Nonprofit Llc. Northern Great Plain, Hungary

	Regional Association of Local Governments of Western Macedonia (PEDDM), Western Macedonia, Greece
	Lodzkie Region, Poland
	South-West Oltenia Regional Development Agency, South-West Oltenia Region, Romania
	Extremadura Energy Agency (AGENEX), Badajoz, Spain
	Energy Agency of Savinjska, Šaleška and Koroška Region, Savinjska, Šaleška and Koroška Region (KSSENA), Slovenia

1.3 DeCarb A4 workshop

The interregional workshop was jointly organised by AGENEX and KSSENA two of the partners and took place online on the 20th and 21st of September 2022. The agenda of the workshop is shown below.

Final Agenda
1st day
09.00 – 09.30 Registrations at the Homestead Karničnik
We will gather directly at the homestead, which is located outside of the city, on the hilly surroundings of the Šaleška valley. There is a 10-minute drive from the hotel to the location of the homestead (5,0 km from the hotel Razgoršek).
09.30 – 10.00 Introduction to the workshop
Following greetings and presentation of the City of Velenje, we will hold a short introduction of the 1st thematic session of the workshop.
10.00 – 11.45 1st thematic session – Risk management in decarbonisation planning
We will bring and peer-review good governance practices from our own regions that integrate risk management and mitigation tools to transitions planning (e.g. climate risk assessment, risk governance models), focusing on how to design and integrate effective risk management measures, to shield coal phase-out from external crises.

Please prepare a short (5 - 10 minute) presentation on this topic and fill out Annex A!
11.45 – 12.00 Short pre-lunch break
12.00 – 13.30 Traditional Slovenian lunch
At the location of the homestead the traditional Slovenian lunch will be served. (Beef and mushroom soup, pork roast, plum strudel)
13.30 – 15.30 2nd thematic session – Resilient transitions through energy citizenship
After lunch we will continue with the second thematic session of the workshop. We will bring & exchange good practices from our own regions on how citizens can participate in regional energy planning, ensuring wider consensus for transitions; we will draw from the good practices to discuss how to make existing governance models more resilient for future crisis, integrating energy citizenship approaches & concluding with specific participatory models to be transferred in our own regions.
Please prepare a short (5 - 10 minute) presentation on this topic and fill out Annex A!
15.30 – 16.00 Project meeting (if needed)
16.00 – 19.00 Hotel break
Following the project meeting & the concluded workshop, we will return to the city centre.
19.00 Joint Dinner, Venue: Pizzeria Picadilly (Stari trg 35, Velenje)
2nd day
09.30 – 10.00 Welcome to day two of the workshop, registration & morning coffee
10.00 – 13.15 Visit to back-to-back event
As a DeCarb consortium we will visit and interesting back-to-back event – The WELCOME, FUTURE 2022 Conference, which will be organized on the 21st of September in Velenje. *Transformation of District Heating Systems in Europe* Wednesday, 21st of September 2022, Velenje, House of Culture, In-person and online (hybrid)
13.15 – 13.30 Transfer to the location of the oldest mining area in Velenje
13.30 – 14.00 Preparation for the descent of 150 m underground
14.00 – 15.00 Visit of the Coal Mining Museum of Slovenia

At the location, we will descend more than 150 m underground, where the Slovenian Coal Mining Museum is located. You will be able to take a look of the entire history of coalmining in the Šaleška valley, the formation of the Šaleška lakes, the mining methods used in Velenje and the rich regional mining tradition, still existing today.
15.00 – 15.05 Visit to Šaleška lakes
At the end of the museum visit, we will take a 5-minute walk to the Velenje beach – the center of all tourist activities in the valley, where we will conclude with the activities of the 1st day. You will be able to enjoy the beautiful atmosphere of the Šaleška lakes, taking a coffee break, snack, or a relaxing walk along the largest viewing platform and outdoor stage in Slovenia – "Vista Velenje", simultaneously enjoying the breeze coming down through the lakes from the steep hilly surroundings.
15.30 End of the workshop and goodbyes

2 Resilient transitions through energy citizenship

The transition towards a sustainable and coal-free society not only requires substantial investments across Europe, but also the involvement of relevant stakeholders from public and private sectors, as well as the EU citizens. The transition from fossil fuels towards a carbon-neutral economy poses a lot of challenges of economic, social, governmental, and technological nature.

Citizen cooperatives and local authorities can play a crucial role by developing public-civil partnerships[1]; by building a good connection between different stakeholders from public and private sectors and engaging citizens, they become partners in the transition, and they understand, trust, use, and feel ownership of the integrated energy solutions offered in their area. To achieve the "well below 2 degrees" climate targets, a new ecosystem needs to be defined where citizens become more active. This means moving from the traditional concept of citizens-as-consumers towards energy citizenship; energy citizenship represents a way of participation in addressing energy poverty and vulnerability, but also in promoting energy justice[2].

2.1 Concept of energy citizenship

The concept of energy citizenship prescribes active citizen participation, such as adopting renewable technologies, joining energy communities, supporting local initiatives, and participating in policy decision-making. The concept of energy citizenship[3] was a constituting element of energy democracy[4], referring to the idea that citizens will have a key role in the energy transition[5]. Indeed, literature has included questions of 'humanising' the transition by exploring new ways of thinking about public engagement and participation that go beyond traditional forms of governance. The term of energy citizenship is generally used to explain how community energy practices might help individuals to learn about energy and sustainability and to build capacities for engaging in broader energy policy.

---

[1] Holemans, D.; Van de Velde, K. Citizens Energy: Making Energy Democracy Happen; Green European Foundation: Brussels, Belgium, 2019.

[2] European Commission, Joint Research Centre, *Mapping European projects, Energy citizenship and energy poverty*, 2022, https://data.europa.eu/doi/10.2760/04963

[3] https://www.sciencedirect.com/science/article/pii/S2214629621005697
Madeleine Wahlund, Jenny Palm (2022) The role of energy democracy and energy citizenship for participatory energy transitions: A comprehensive review, Energy Research & Social Science, Volume 87.

[4] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0095

[5] https://www.sciencedirect.com/science/article/pii/S2214629620302930

Energy citizenship offers an approach for citizens to become actively involved in the energy transition, and engage politically, either as consumers and users by participating in protest and support movements or most importantly as prosumers. A shift towards energy citizenship requires a move beyond individualistic approaches, in order to include collective and inclusive spaces for participation and engagement. Low-carbon communities are an example of these collective spaces that aim at providing new contexts for action. These communities can be place-based, linked to certain geographical boundaries (cities, municipalities, districts, neighbourhoods, etc.) but they can also be interest-based when members share a common interest. Digital communities are also rapidly emerging in the last decade providing collective spaces to reflect and participate in the energy transition. Moving towards energy citizenship implies a stop to seeing energy as a commodity and a shift towards acknowledging energy "as an ecological resource and as a social necessity, subject to collective decision-making".

2.2 EU policies and initiatives for energy communities

In recent years, many EU countries have implemented policies to make it easier for citizens to set up energy communities. European legislation following on the Clean Energy Package (CEP), the Internal Energy Market Directive (IEMD), and the Renewable Energy Directive (RED II) has fostered advances by recognising 'citizen energy communities' and 'renewable energy communities' at the EU level, to provide an enabling framework and a level playing field with other energy provision models. Participation in energy communities can take different forms, but often includes participating in cooperatives, setting up local collective self-consumption schemes, acting as market aggregators and selling surplus energy from various energy communities, adopting diverse organisational and decision-making structures, and providing citizen-led responses to local energy need.

More specifically, the European Green Deal, as an overarching policy, impacts Europe's transition to energy democracy, and energy communities. The main elements of the Green Deal that will be relevant for energy communities are:

1. Supplying clean, affordable and secure energy.
2. Buildings renovation and addressing energy poverty.
3. Financing the transition: Sustainable Europe Investment Plan.
4. Mobilising Research and Innovation.

2.3 Energy citizenship impacts

Energy citizenship enhances growth, productivity, job creation and economic and social resilience. There are many benefits in participating and establishing community energy projects. By prioritising local needs and managing expectations, community members are

united in acting on energy challenges while increasing knowledge, understanding, and awareness of energy issues in general. There are several studies that analyse the implicit opportunities for community-based energy projects, mainly focusing on economic, social or environmental benefits.

The economic benefits are job creation that also leads to income generation, potentially reduced energy (electricity or other) costs, and the overall development of local communities. Energy citizenship enforces improved awareness and acceptance by providing better understanding of low carbon energy, by supporting energy saving behaviour and generally raising awareness for different energy issues. Participation can be direct from financing to fostering participation at different levels, such as of citizens involved in political processes dealing with energy policies. Energy citizenship fosters community cohesion, empowers citizens and improves social well-being. Connected to both participation and education, people involved in community energy activities are generally also more receptive to ethical and environmental commitment. Energy citizenship can influence people's lifestyles and promote more sustainable behaviour.

However, for a "citizen-as-consumer" to "energy citizen" transition, multiple barriers need to be overcome, namely institutional, infrastructural, financial, and regulatory. Investing in new energy infrastructures and putting in place legislation that enables innovative governance structures can bring citizens one-step closer to the desired energy citizenship[6]. It is crucial to work on an inclusive notion of energy citizenship and to understand what energy citizenship means for different groups of citizens. Uncovering the dynamics behind different types of energy citizenship transition might shed some light on how to better support citizens and collectives in their own journeys.
Collective prosumers still face regulatory challenges in the EU despite great advances in some national contexts in recent years. These include not being able to legally set up renewable energy communities, a lack of incentives to set up joint renewable self-consumer projects, and, in some cases, the reduction or removal of existing incentives. In addition, Inês et al.[7] warned that matters that risks the exclusion of more vulnerable communities and lower-income families, such as the high costs as well as organisational and knowledge needs to set up local projects, have been insufficiently addressed in European legislation.

The idea of the energy consumer whose responsibility for the energy transition is reduced to investing in innovative energy technologies and purchasing energy efficient devices is based on individuals who are only motivated to change their behaviour if presented with the right financial incentives. As a result, scenarios of inequality and exclusion arise, leaving

[6] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0035
[7] Ines C., Guilherme P.L., Esther M.-G., Swantje G., Stephen H., Lars H. (2020) *Energy Policy*, 138 , art. no. 111212

behind those who lack the means to "contribute" or to "participate" in the energy transition through changes in their economic behaviours. The risks of this "material-based energy citizenship[8] needs to be carefully considered to avoid excluding economically less privileged citizens or those who live in less technologically advanced areas.

Furthermore, in their case study of the electricity market liberalization in Estonia, Vihalemm and Keller[9] noted that rather than focus solely on regulatory frameworks to enable community energy, it is necessary to consider cultural barriers such as distrust of collective agency or lack of relevant skills so to understand where this form of energy citizenship is likely to develop.

The energy citizenship literature has focused on how different forms of energy citizenship can be enacted through energy policy. For example, in the case of Italy[10], the perception of energy citizenship differs depending on the level of energy governance. Procedural participation and the development of citizen-led initiatives at the local level were rather recognised as a resource. Naturally, divergent views of energy citizenship can create tensions and incoherence between different scales in terms of what form public engagement should take. These tensions are not exclusive to actors at different levels of governance. In policy processes, different ways of understanding energy citizenship can sometimes overlap and even enacted in complementary ways to realise certain political goals. This was demonstrated by Mullally et al.[11], who identified six distinct narratives articulating divergent views of energy citizenship among actors in their study of an energy policy consultation process. These ranged from a top–down paternalistic frame to a bottom–up deliberative frame. In the paternalistic frame, mostly found among energy firms, public agencies, and trade unions, no citizen participation, beyond legally mandated processes, was deemed necessary. Rather, policy-making was considered best handled by experts and implemented in a top–down manner through information and education. At the other end of the spectrum was the deliberative frame, found among some environmental NGOs and political parties. These groups advocated citizen involvement in all stages of the policy cycle. Energy policy should originate at the community scale and feed into local authority, regional, and national plans through an inclusive bottom–up approach.

[8] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0040
[9] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0265
[10] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0330
[11] http://refhub.elsevier.com/S2214-6296(21)00569-7/rf0115

3 Good implementation cases and/or practices that support "Resilient transitions through energy citizenship" in DeCarb regions

Partners throughout thematic session 2 exchanged good practices from their own territories on how citizens can participate in regional energy planning, ensuring wider consensus for energy transitions. In particular, partners drew from these good practices to discuss how to make existing governance models more resilient for future crises, integrating energy citizenship approaches, and concluded with specific participatory models to be transferred in own regions. The good practices presented, as well as the two practices (GP8 and GP9) that were introduced in writing in the forms that partners had to complete before the workshop (good practices questionnaire form) but not actually presented in the workshop, are described hereinafter.

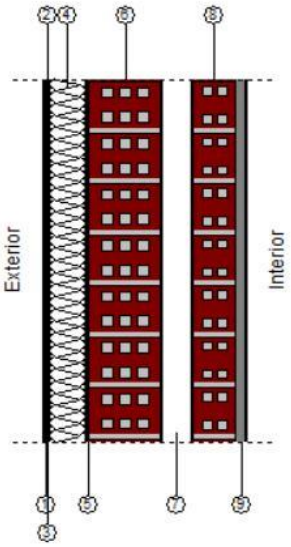
Good practice 1: Shared self-consumption models for public buildings in Extremadura, Spain (AGENEX)

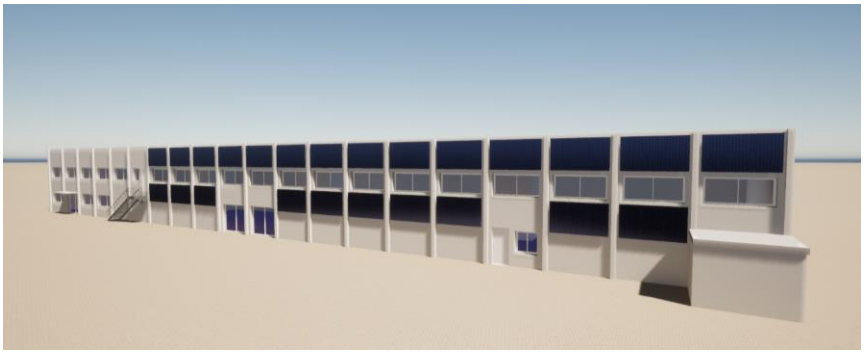
Two pilot actions related to sharing self-consumption among public buildings are being developed in Extremadura, one in each province, in the framework of the INNOINVEST project (co-funded by Interreg POCTEP), a cross-border Interreg Spain-Portugal cooperation project led by AGENEX[12]. The main considerations for the actions include the increasing energy prices and the recent regulation that allows sharing self-produced energy within 500 metres.

The **first** pilot is located in several public buildings owned by Badajoz County Council, all of them within a radius of 500 metres to comply with the current regulation for shared self-consumption. In this case, the buildings targeted are offices and a university hall of residence, which have consumption curves (administration hours and residential) that are complementary. The total amount of photovoltaic power to be installed is 114 kW, and it will not only be on the rooftop, with the optimal inclination of the zone, but also vertically on the facade of the building. This is an innovative example that may be applied in those cases where rooftops are not suitable or available for PV installations. The pilot action includes the creation of a ventilated facade using the PV panels themselves and an ETICS system adhered to the facade. The combination of both will reduce the buildings' energy

[12] For further information, you can email Rachel Tully (rctully@agenex.net)

consumption and also produce renewable energy to cover the reduced energy needed; at the same time it will be improving the buildings' performance.

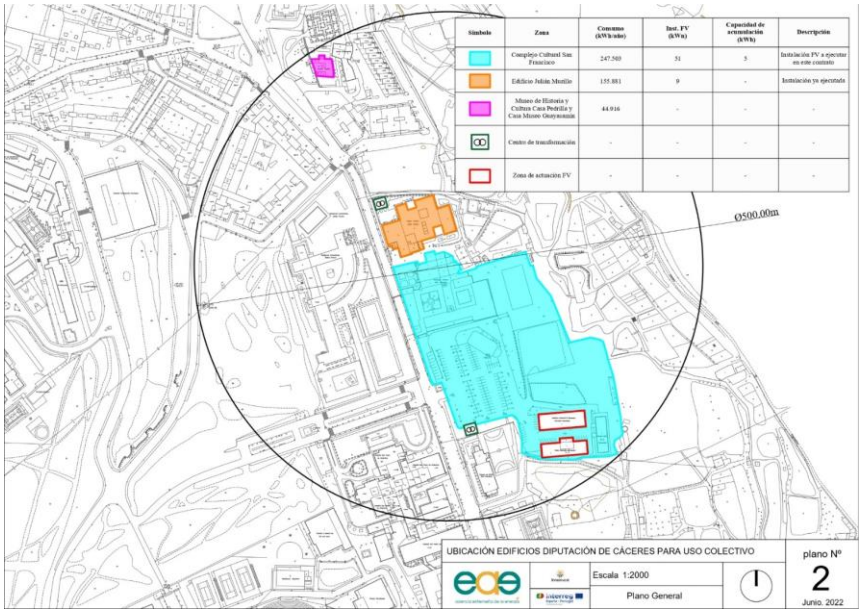




The insulation proposed is 6 cm thick, and the PV power installed on the facade is 30 kW. This is one of the examples of buildings that do not have any space on the rooftop because it has a solar thermal installation already, used for hot sanitary water in the hall of residents. The difference in temperature creates a chimney effect, making hot air in summer go up and renew the air camera with cool air. This does not allow the facade to overheat in the summer months. In winter, this system allows the building to maintain the heat inside. Other advantages of this insulation system are:

- Prevents condensation and humidity.
- Increase of the life cycle of the facade.
- Strengthening of the structure: avoiding cracks.
- Improvement of the thermal and acoustic isolation.
- Increase of the energy efficiency.
- Little maintenance.
- Increase in the buildings value.

The **second** pilot action has been promoted in collaboration with Caceres County Council and is about the installation of photovoltaic solar generation for shared self-consumption including 51kW of storage. This sharing scheme is developed among several of the buildings that the regional council has in Caceres - mainly offices and cultural buildings, like libraries, which have similar hours of use. There is already an existing PV installation of 26,1 kW that will be complemented with a second installation of 27,9 kW as well as with the storage system.



The current regulation when dealing with shared self-consumption states has to be shared in a radius of 500 metres. The circle on the figure shows this 500m limit between the furthest generation point and the consumption point. In this case, the PV generation system is located in the red rectangles, and the furthest building is the one highlighted in pink.

The main **objectives** are to contribute towards a clean energy transition by reducing energy consumption in some of the public buildings that belong to both regional councils in Extremadura. The actions to reduce consumption include supplying as much of the energy needs as possible with renewable energy that has been generated onsite. Therefore, dimensioning the installations should be done in an optimal way to increase the generated green energy to both meet the buildings' energy demand and include electric storage.

The good practice has been developed thanks to the collaboration of a provincial **public** authority (from the province of Badajoz on one hand, and the province of Caceres on the other hand) and the regional energy agency (AGENEX), which is also a public body. Nevertheless, the regulation that allows sharing the energy produced by a self-consumption installation is recent and relatively unknown, so the private sector and the citizens will hopefully replicate it. Due to the distance limitation in the law that regulates

sharing self-consumption, this scheme can be applied at **local level**. But it is obviously replicable in other regions and across the EU.

In this specific good practice, the main **actors** involved are the public authorities and public entities developing the action; private companies of the sector and installers can also be participating actors; the citizens that work and/or live in the buildings will benefit from better comfort and thermal conditions; and all in all it will definitively be an inspiration for community groups to follow similar processes. No problems have been identified prior or during the action's **implementation**.

When **transferring** this practice to citizens, there are two potential **problems** identified:

- The first is the financing of the investment: in this case the project is developed through public funds, and due to its innovative aspect, through pilot project funding. But in the case of citizens, private investment would be needed, although public grants are available to cover a significant part (at least 30%).
- The second is how to divide the financing: in this case, even if there are several buildings involved, they are all owned by the same public authority. However, in the case of citizens, a fair division of the costs and revenues (through energy mainly) must be calculated in a way that every involved party agrees upon.

The **impact** achieved is **environmental** (less energy consumed and more renewable energy produced), **economic** (significant savings are achieved from an economic point of view) and **social** (as it will boost community energy projects). This **experience** is exemplary, showing a model of shared self-consumption among public buildings. It is an example at the county council level that could be transferred to municipalities, where city councils could mobilise citizens to promote energy communities with public-private participation. In addition, the vertical PV panel installations will demonstrate the viability and the benefits of this model as an alternative for PV installations when rooftops are not suitable for them. No additional requirements will be needed to properly implement the recommendation/good practice (e.g. further training for current workers, infrastructure). It will be enough to have the will to implement the good practice and a favourable regulation that allows it.

Good practice 2: County-level Employment Pacts and National Calls for Proposals to Promote a Just Transition to the Labour Market (ENEREA)

The Just Transition Call for Proposals TOP-5.1.1-15 County-level employment agreements, employment-economic development cooperation has contributed to the implementation of training and employment programmes. The **aim** of the project was to establish a functioning county-level employment cooperation that will help to improve the employment situation in the counties, taking into account the needs of the labour market. In the 2014-2020 development policy period the pacts to be set up under the TOP aimed primarily to meet the needs of entrepreneurs and employers in the counties, i.e. demand. The immediate **objective** was to train and employ people, while the long-term objective is to reduce unemployment also regionally. The TOP-5.1.1-15 beneficiaries can be from local government office, county governments or enterprises in which the State or a municipality participates, jointly or separately. However they cannot be beneficiaries individually, only as a consortium partner.
Due to its popularity, the programme will continue in the programming period 2021-2027 under the name TOP_Plus-3.1.1-21 County Employment-Economic Development Cooperation (Operational Programme for Regional and Local Development Plus).

The activities within **TOP-5.1.1-15** were:

A. Employment-Economic Development Cooperation project section:

a) Establishment and operation of employment-economic development cooperation.
b) Developing and implementing an employment and economic development strategy.
c) Other activities supporting economic development and employment.
d) Professional, methodological and IT developments necessary for project implementation.
e) Activities to promote employment.

B. Labour market programmes, training, employment, employment of the target group:

a) Employment services for the target group. The following activities may be supported in relation to the target group, to the extent and for the duration specified in the applicant's professional regulations:
   - Support for adaptation to the labour market (training).
   - Wage subsidies.
   - Grants for the use of employment promotion services.
   - Mobility aid.
   - Aid to facilitate access to employment services.
   - Occupational health services.

b) Implementation activities related to direct support to the target group.
c) Professional, methodological and IT developments necessary for the implementation of the project.

Additionally, the Just Transition GINOP call for proposals 5.3.5-18 has contributed to improving the adaptability of the labour market, strengthening social responsibility and the role of service providers, as well as to strengthening the social and labour market role of social partners, increasing their representativeness and capacity building. The Trade Union of Mine, Energy and Industrial Workers implement the programme.

GINOP-5.3.5-18 activities include:

A. *Professional, methodological developments:*
   a) Studies, impact assessments, analytical studies on employment, labour market, labour law, labour issues.
   b) Data collection and processing.
   c) Developing a proposal for a solution to the labour market challenge, methodology based on the results of research/analysis.
B. *Publication and dissemination of professional and methodological developments, implementation of related campaigns:*
   a) Sharing the professional content, results and proposals of the project with the target group (employers and/or employees, professional partners, other relevant target groups).
   b) Making the professional, methodological developments and proposals available on online professional platforms.
   c) Other targeted awareness-raising and/or information campaigns.
   d) Preparing a set of proposals for decision-makers in the context of data collection and analysis.
C. *Project preparation activities:*
   a) Feasibility study.
   b) Preparation of a professional, methodological developments plan for a pilot project.
   c) A pilot project plan, including the methodology related to the pilot project plan in the case of a pilot project (pilot project).
D. *Implementation of the pilot project, the developed solution proposal, methodology testing the practical application of the method and methodology with the involvement of the target group:*
   a) Preparatory activities related to the target group (recruitment, selection, involvement).
   b) Detailed design, testing and adaptation of the methodology.
   c) Training.
   d) Service, advice to employees.
   e) Services and advice to employers.

f) Service development.
g) Organisation of information events, campaigns.
h) Production of information material, information booklets.
i) Structured processing, evaluation and publication of the pilot project experience.

E. Capacity building of social partners:

a) Provision of a professional trainee to support employment and employment and labour market experience, as well as towards the younger generations of organisations.
b) To open up their organisations to younger generations.

GINOP-5.3.5-18 **beneficiaries** can be:

- Employers' and employees' representative organisations and their associations with membership in Sectoral Dialogue Committees established by law under Act LXXIV of 2009 on Sectoral Dialogue Committees and certain issues of medium-level social dialogue (e.g.: Trade Union of Mine, Energy and Industrial Workers GINOP-5.3.5-18-2019-00125 project).
- As consortium members, the state-recognised higher education institutions listed in Annex 1 to Act CCIV of 2011 on National Higher Education, as well as research institutes, non-profit research organisations and for-profit organisations whose activities include social science, humanities research and development.

A common **problem** for TOP-5.1.1 and GINOP-5.3.5 is the relatively rapid depletion of available resources. A solution to this could be to have more resources 'from above' authorities, as many resources as needed.

Good practice 3: Public letter, about the views of the local authorities on the conditions for the just transition, Slovenia (KSSENA)

The mayor of the City Municipality of Velenje, Mr. Peter Dermol (together with his colleagues), launched an initiative on 26.4.2021 to inform the local citizens about the conditions (demanded by the local authorities) to be considered by the state for the purpose of ensuring a just transition. The local authorities have designed a public letter (leaflet) in which they clearly presented their **aim** on the restructuring of the region, conditions to be met by the state (during the restructuring process) and their guidelines for the future of the region's decarbonisation process.

The urge for the public understanding was critical at the time, as some important policy instruments (as is the National strategy for phasing out coal and restructuring of the coal intensive regions in accordance with the principles of a just transition) were adopted during the period, which were only briefly discussed in public consultation process. However, public understanding was not only necessary for understanding the National strategy and other political instruments but also for the right local response to the stormy media coverage, which was triggered by the vast number of meetings, events, and discussions, held on the subject of the state and regional restructuring at the time. It was essential that the citizens completely understood and supported the work of the local authorities. The public letter was distributed to households, by the local post office. More than ten thousand of public letters were distributed. The data on the expenditure of the action is kept by the administration of the City Municipality of Velenje.

Initiator was the City Municipality of Velenje while the key **actors** were the citizens of the City Municipality of Velenje. The main risks identified were the just and fair regional energy transition and a proper restructuring of the region. Problems anticipated regarding citizens' involvement in the transition include:

- The lack of awareness.
- The lack of knowledge.
- Ignorance of local government strategies.
- The blindness for solutions and the different approaches to solutions.
- Low level of capacity building.
- Low level of trust in the operation of local authorities.
- Ignorance of political instruments and policy impulses, etc.

The action was carried out by the mayor's office, with the help of other colleagues. The mayor Peter Dermol prepared a strong and decisive speech, which was summarized in the letter. The letter was very well received as the public interest in restructuring has grown greatly (judging by social network activity, and public phone calls). The citizens started to feel that there are measures being taken for the cause.

Strong and decisive public-relations actions are always a good and right dissemination choice in the times of need, such is the region's restructuring process, when the local government needs clear, strong, and united support from the local citizens. The local population can be also informed about other on-going initiatives, ideas in development, regional and interregional projects, work, and effort made by the local government on the subject. Our region strives for a higher level of public discourse, so that the citizens of the SAŠA region support the effort of the local politics and its decision-makers, and at the same time help the region's restructuring process itself. A very good example of cooperation with the local authorities can be summarized according to the Danish model, where decision-makers have open street offices, and this is one of the good practices that Slovenian DeCarb partners have learned from Danish.

The public letter is fully available on the following link:

https://arhiva.velenje.si/Aktualno/2021/pismo%20%C5%BEupan%20mov%20prestrukturiranje-www.pdf.

Good practice 4: Consultancy support system for the public sector, housing and entrepreneurs in the field of energy efficiency and RES (Lodzkie region)

This good practice is a complex education project **aimed** at training municipal energy officers, as well as raising awareness and educating a wide audience (mostly the local government units, local entrepreneurs, housing communities) in the field of energy efficiency and RES. There is a wide range of forms of counselling including:

- Trainings, conferences, webinars,
- Informational meetings,
- Telephone advice,
- E-mail queries,
- Consultations,
- Individual advising.

"Consultancy support system for the public sector, housing and entrepreneurs in the field of energy efficiency and RES" is a project implemented under the Operational Program Infrastructure and Environment 2014-2020. The beneficiary (Lead Partner) of the project is the National Fund for Environmental Protection and Water Management in cooperation with 15 Provincial Funds for Environmental Protection and Water Management (WFOŚiGW), as Partners.

The project as a training and education initiative is part of the process of the transition from conventional to renewable energy at national, local and regional level. As mentioned, the overarching **objective** of the project is to train municipal energy officers and increase awareness and knowledge on energy efficiency and RES among local governments, entrepreneurs, SMEs, and the local community including individuals.

The **key actors** involved in the process are:

- Municipalities,
- Enterprises (large as well as SMEs),
- Providers of energy services,
- Cooperatives and housing communities,
- State territorial entities (statistical offices, courts, prisons, fire departments, schools, boarding schools),
- Universities, public authorities, and communities and representatives of particular social groups, and
- Individuals.

The **main risks** to manage are:

A. **Lack of awareness of the problems of developing a low-carbon economy:**

- An underdeveloped market for energy efficiency investments.
- Lack of confidence in the existing system of energy performance certificates and poor quality of energy audits.
- Insufficient public-private dialogue activities to develop and promote a vision for efficiency improvements in buildings.

B. **Lack of knowledge of possible solutions:**
- Lack of knowledge about how to access data about "business cases" that are proven to work.
- Little experience of entities and municipalities in using EU support in the form of loans.
- Lack of detailed analysis of energy efficiency needs in municipalities.

C. **High investment costs:**
- High project preparation costs relative to the investment cost, especially for small projects.
- High investment costs required for comprehensive building upgrades.

D. **Legal barriers**
- Restrictive budget and procurement regulations.
- Lack of knowledge with new procurement regulations.

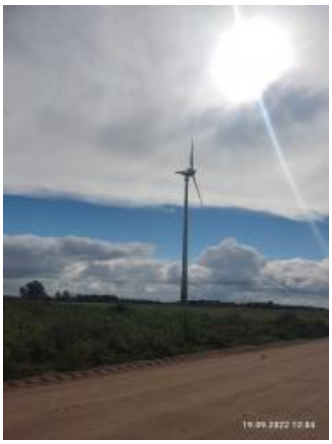
Solutions to the aforementioned problems and expected **impacts** of the project are:

- Increasing awareness on energy efficiency and RES through training and information activities on the part of local governments, entrepreneurs, SMEs, and the local community including individuals.
- Well-trained municipal energy officers.
- Numerous well prepared topics of Low Carbon Management Plan (PGNs)/ Action Plan for sustainable energy (SEAPs) such as the scope of the PGN, the greenhouse gas emission inventory base, and identification of projects possible for support from public funds, including EU funds.
- Promoting among municipalities the idea of having low-carbon management plans and pointing out the benefits of implementing PGNs, encouraging cities and municipalities to join the Covenant of Mayors.

Good practice 5: Burzenin Municipality as an example of the cooperation between citizens and local government for Renewable Energy Sources (RES) development (Lodzkie region)

In the area of Burzenin Municipality, the Złoczew Mine was planned to open circa 2026. However, in the context of the decarbonisation policy and the potential negative results for the environment, it was decided to not open the new mine. Correspondingly, some of the solutions towards RES developments include:

a. Increase consumption of energy produced directly from sun and wind (2 MWatt in photovoltaic and 1,5 MWatt in wind turbine),



b. Two new public charging spots for electric vehicles and numerous heat pumps were installed in parallel in households,

c. Renovation of heating systems from non-effective, coal installations in public buildings (schools/medical centres) into pellet ones, and
d. Consultancy support system for the public sector, housing and entrepreneurs in the field of energy efficiency and RES (details at Good Practice 4). This new administration system, which supports donations, prepares applications and

implements projects of the citizen's program "THE CLEAN POLAND" resulted in around 40 new applications concerning the replacement of heating systems, new photovoltaics, and insulations of houses in 2022.

Good practice 6: Establishment of Two Energy Cooperation's in the town of Gabrovo, Bulgaria (SZ REDA)

The National Consultative Council for the European Green Deal supports two energy cooperatives to be established in Gabrovo municipality. The **purpose** is to create a legal framework for energy communities in Bulgaria and to enhance technical and financial capacity building. The main **objectives** are:

- Legislative changes in the Energy act to allow the emergence of energy communities.
- Working on respective projects to ensure that energy communities could be established throughout the country.
- Transferring the good practice to other municipalities.
- Building capacities in administration.

The **key actors** involved in the process include: municipalities, civic organisations, development agencies, private companies, policy makers, citizens, and associations of property managers, NGOs, construction companies, and energy agencies.

Main problems for Risk management and Citizens' Inclusion:

A. Risk management
   - Access to funding.
   - Political turmoil.
   - Level of activity of the citizens.
   - Legislative obstacles.
   - Lack of capacity.

B. Citizens' inclusion
   - Lack of communication on the topic.
   - Lack of public acceptance.
   - Public inactivity.
   - Citizens' inactivity.

This project is one of the pilot projects for creating energy communities. The municipalities in the Region of Stara Zagora are looking forward to start an energy community project on its territory as well.

Good practice 7: Establishment of Monitoring and Assessment Mechanism of Just Energy Transition (PEDDM) - Policy

The recommended Good Practice refers to the establishment of **Just Transition Observatory** that could function as an *independent evaluation body* (with periodic reports or focused studies) of the course of the Energy Transition Programs, identifying potential difficulties, recording impacts, results and outcomes and providing policy recommendations. Given that just transition plans include a number of important transformational policies and transformational plans, the crucial question that arises is whether regional and central policy makers have the tools to evaluate these transformational policies and transformative projects.

The primary **aim** of the European Green Deal is to move towards climate neutrality in a socially just and inclusive way. To this end, the EU has set up the so-called "Just Transition Mechanism" (JTM), which will provide funding and technical assistance to the regions of the EU most affected by the transition to a green economy. However, in addition to securing sufficient resources and providing technical assistance for their utilization, a critical factor for the successful outcome of the transition in coal dependent regions is the establishment of effective monitoring/assessment mechanisms and place-based governance models. This reflects the departure of European politics from horizontal and one-size-fits-all policies. This is done for two reasons which are: (a) the utilization of local knowledge and local territorial capital deals better with problems and (b) the transfer of the level of decision-making and implementation of policies as close as possible to the citizens to whom they concern. An effective governance model, however, should be accompanied by an effective mechanism for scientifically monitoring, analysing, evaluating, and formulating substantiated policy proposals.

The key **actors** involved in the process will be:

- Greek government and involved ministries.
- Just Development Plans' Managing Authorities.
- The University of Western Macedonia.
- The Region of Western Macedonia.
- The coal-dependent Municipalities.
- The Chambers.
- NGOS and experts.

The main risks to tackle are:

- Lack of political will to strengthen decentralization.
- Insufficient support of local autonomy.
- Bureaucracy.

Problems identified regarding citizens' involvement in the transition are:

- Lack of awareness.
- Top-down governance model.
- Lack of trust in the consultation processes.

Setting up and operating a Just Transition Observatory could be a valuable support mechanism if it has the presumption of multi-level expertise and objectivity, deep knowledge of local specificities and legitimacy to institutionally represent the public interest at the local level. In this regard, it is necessary to design evaluation models based on predefined indicators and criteria that will be jointly defined in the context of public consultation. This will ensure on the one hand the objectivity on the basis of commonly agreed indicators and objectives and on the other hand the legitimacy and acceptance of both strategic policies and specific investment plans.

Other regions and countries could easily replicate this good practice and adapt it into local conditions on a tailor-made perspective.

In order to properly implement the recommendation/good practice the following will be needed:

- Policies synergies and collaboration.
- Development of a free access "data repository".
- Training and networking activities.

Good practice 8: Establishment of a Place-based Just Transition Governance Model (PEDDM) - Policy

It seems that resilient, sustainable, and inclusive transformations in coal dependent regions, such as Western Macedonia, require minimizing social distress, placing emphasis on competitive advantages locally and the fast-growing sectors globally, and responding to climate neutral challenges. To this end, the elements of effectiveness, justice and 'place-bound' in a transition's governance, prove to be enabling factors to make transition pathway truly successful and tackling such multifaceted challenges and, sometimes, competing agendas. To sum up, a new operationalizing balanced perspective between the state, the market, and the society on the one hand, and the top down and bottom-up policies on the other, seem to be crucial for a success and just governance transition pathway.

The place-based approach has provided a challenge to re-think spatially 'blind' policies. In this regard, the gap between efficiency and equity, redistributive logic (needs, results), and development policy (inclusive development) can be bridged through the so-called 'spatial territorial capital. Top-down and bottom-up policies need to find a working balance between efficiency and the territorial perspective. In this framework, the real question should not be about 'who is in charge of designing and implementing a development policy?' but about 'what is the balance and mix of policies at the central, regional, and local levels of administration?'.

The initiator of the intervention is the Greek Government. The key actors involved in the process:

- Greek government and involved ministries.
- Just Development Plans' Managing Authorities.
- The University of Western Macedonia.
- The Region of Western Macedonia.
- The coal-dependent Municipalities.
- The Chambers.
- NGOS and experts.

The main risks to be tackled are: the lack of political will to strengthen decentralization, insufficient support of local autonomy, and bureaucracy. Main problems regarding the citizen's involvement in the transition are: lack of awareness, top-down governance model, lack of trust in the consultation processes.

The concept of 'place' in the place-based approach, is detected, defined, and interpreted, through a relational perspective. Seen in this respect, the 'place' is not encapsulated, but porous as part of broader relationships, which can be horizontal, vertical, or transversal,

reflecting a multilevel governance model. From this perspective, the idea of the place-based approach is of particular importance.

Other regions and countries could easily replicate this good practice and adapt it into local conditions on a tailor-made perspective. In order to properly implement the recommendation/good practice, the following will be needed:

- Policies synergies and collaboration.
- Development of a free access “data repository”.
- Training and networking activities.

Good practice 9: Responsible Research and Innovation as a lever of Energy Transition (PEDDM) - Policy

The recommended Good Practice refers to the establishment of the H2020 project RRI-LEADERS (2021 onwards) that foresees the implementation of a structured approach that will investigate the application and sustainability of the Responsible Research and Innovation paradigm within territorial innovation systems. The project includes four distinct territories from different regions of Europe, representing distinct socio-economic backgrounds with each own governance and decision-making infrastructures. The Region of Western Macedonia is amongst the participating territories, implementing RRI approach in the specific policy focus of Energy Transition. The intervention is initiated by public authorities either regionally or EU wide. The project is implemented on a territorial basis, involving four different regions of the EU.

The main **objective** of RRI-LEADERS[13] project is to leverage shared leadership of the RRI approach across the involved territories in:

- Promoting the embedment of RRI principles within territorial governance objectives through innovative and responsive multi-factorial approach towards the development of policies related to science and innovation and
- Creating an innovative perspective on the RRI perspective in territorial policy making.

For the Region of Western Macedonia the chosen policy focus is shared into three distinct categories:

- Developing a stakeholder engagement strategy to be implemented along the post-coal transition road map.
- Strengthening existing policy-making systems that should involve distinct modes of territorial governance of the post-coal transition strategy.
- Developing a methodology that should involve a user-friendly and revolutionary transition from the coal chain towards a different development policy.

The key **actors** involved in the process are:

- Local Government Association of Western Macedonia.
- The University of Western Macedonia.
- NGOs and experts.
- Local businesses.

[13] https://www.rri-leaders.eu/

The main risks to be managed include:

- Lack of political will to strengthen energy transition.
- Insufficient support of local autonomy.
- Bureaucracy.
- Lack of public interest (by local businesses and citizens) to be drastically involved in the concept of energy transition.

The main problems pertaining to citizens' involvement in the transition are:

- Lack of awareness.
- Top-down governance model.
- Lack of trust in the consultation processes.

The **impact** of RRI-LEADERS project is to strengthen current regional networks and communication/work dynamics amongst different actors in the existing ecosystem. The project is expected to lead to a more accessible mechanism of policy planning and decision-making at the regional level. At the same time it aims at encouraging leadership between territorial actors, further enabling the implementation of the Response and Innovation systems by stimulating diverse actors' from the quadruple helix model (Policy makers, Academia, Businesses, NGOs). More specifically, the project is expected to provide the implementation perspective of a more effective energy transition paradigm that includes the processed initiatives of the four helices regarding the RRI principles. That is to embed the five RRI keys (Public Engagement, Open Access, Gender Equality, Science Education and Ethics) and that four AIRR dimensions (Inclusiveness, Anticipation, Reflexivity and Responsiveness) in the current energy transition program of the Region of Western Macedonia.

Other regions and countries that plan or currently implement energy transition programs to a coal-free model could easily adopt the initiatives of the good practice and adapt it into local conditions.

In order to properly **implement** the recommendation/good practice what will be required includes:

- Creation of mechanisms (such as digital platforms, etc) that will enable and promote public consultation on a regional and local level.
- Extended synergies and collaboration between the four helices of the quadruple helix on a regional level.
- Development of a free access "data repository".
- Training and networking activities.

Good practice 10: Citizen-involvement practices and resilient transitions through energy citizenship, Southwest Oltenia Region, Romania (SW Oltenia)

A good citizen-involvement practice for South-West Oltenia Region is the project "Increasing the energy efficiency of the main building of Mihail Drumeş gymnasium school, Balş-Olt". The project, funded by the Regional Operational Program 2014-2020 (Total value: 438.803,50 euro/Non-refundable financial assistance: 327.779,52 euro), was implemented by the Balş City Hall from 01.10.2016 to 30.11.2019, in order to support the transition to a low-carbon economy by energy efficiency, smart energy management and renewable energy used in public infrastructure, specifically public buildings.

The project implemented energy efficiency measures by carrying out some intervention works that reduced the energy consumption for space heating, and maintained the internal thermal climate by limiting heat losses to the external environment. The project also improved the appearance of the building. More specific **objectives** of the project included:

- Increasing the number of public buildings with a better classification of energy consumption.
- Reduction of annual primary energy consumption from non-renewable sources simultaneously with the increase of consumption of primary energy from renewable sources.
- Reduction of the specific annual level of greenhouse gases following the investments made through this project.
- Reducing the annual final energy consumption, from non-renewable sources, in the building.

Rehabilitation works carried out within the school headquarters were:

- Repairing of the construction elements of the facade that presented a potential danger of detachment and affected building functionality.
- Modernization of the lightning installation.
- Thermal rehabilitation of the heating system/the hot water supply system.
- Installation of alternative systems for producing electricity and/or heat for own consumption.
- Rehabilitation/modernization of the lighting installation.
- Restoration of interior finishes.

The target group included the people who work or study in the school and benefited from the implementation of the project by the rehabilitation works that were carried out, namely 37 employees, 438 school children, as well as parents and associated citizens.

In accordance with the project' objective, the following **benefits** were generated:

- ✓ Improved indoor comfort conditions.
- ✓ Reduction of energy consumption.
- ✓ Reduction of maintenance costs for heating and domestic hot water.
- ✓ Reduction of pollutant emissions generated by energy production, transport, and consumption.
- ✓ Increasing the energy independence of the building.
- ✓ Lower utility bills.
- ✓ Jobs creation.
- ✓ Supporting the local economy.
- ✓ Educating the population to protect the environment.
- ✓ Better study conditions in the building.

Thus, the presented model had a major **impact** on the community, contributing directly to the sustainable development of existing buildings by offering a modern and energy efficient environment, suitable for the 21st century and the years to come.

4 Peer review analysis of the good practices related to resilient transitions through energy citizenship

The peer review questionnaire was distributed by the organisers and completed by the participants at the end of the first day of the workshop. Each reviewer was asked to review at least one of the practices, which were presented during the workshop.
The good practices at the thematic session 2, namely "Resilient transitions through energy citizenship", were ten, of which seven received a peer review. The practices that did not receive a peer review were: the "Burzenin Municipality as an example of the cooperation between citizens and local government for Renewable Energy Sources (RES) development (Lodzkie region)" (GP5), which was a 'surprise' presentation, the "Establishment of a Place-based Just Transition Governance Model (PEDDM)" (GP8), and the "Responsible Research and Innovation as a lever of Energy Transition (PEDDM)" (GP9) which were introduced only in writing in the forms that partners had to complete before the workshop regarding their good practices.

In total, the completed forms in the peer review of the good practices were 125 for both thematic sessions. The peer review forms related to the session "Resilient transitions through energy citizenship" were 44.

The peer-review form was divided in two main sections:

1. Recommendation evaluation

In this section, the peer-reviewer ranked the recommendation provided in the questionnaire form on a scale of 1 to 5, based on five main criteria:

a. Relevance

The extent to which the recommendation is relevant to the aim of the activity, which is to manage risks of decarbonisation and to achieve resilient transition through energy citizenship in the phase out coal regions.

b. Range

This criterion evaluates how broad the range of the recommendation (in terms of reach) can be. For instance, an awareness raising action for the support of energy communities and the active participation of citizens in the transition could be useful for both the coal workforce and the community as whole.

c. Feasibility

This criterion measures to which extend the target is feasible given the policies, resources, and awareness of relevant stakeholders. The peer-reviewer could also consider the

possibility of disruption of the implementation of the target due to issues encountered (e.g. bureaucratic issues, lack of incentives).

d. Potential impact

The benefits that the proposed practice/measure is expected to deliver in the future.

e. Transferability potential

This criterion evaluates the degree of the transferability of the recommendation. More specifically it examines whether the recommendation can be generalized and transferred to other regions or it is constrained due to local specificities.

2. Overall score

Poor (5-9): A poor recommendation entails constraints during implementation and poor results. Its relevance, range, feasibility, impact or potential for transferability for other EU regions cannot be adequately supported.

Promising (10-14): The recommendation may produce some tangible, measurable and transferable results.

Good (15-19): The recommendation can work well within a specific context, it is feasible and it can have a positive impact. It is possible to bring positive results and be transferable to other EU coal regions.

Very good (20-25): The recommendation is highly relevant and useful. It is anticipated that it will be implemented successfully, bring positive and transferable results and stir citizens and relevant stakeholders into significant action towards the objectives

The practices that received the most reviews (9 each) were the "Consultancy support system for the public sector, housing and entrepreneurs in the field of energy efficiency and RES (Lodzkie region)" (GP4) and the "Establishment of Two Energy Cooperation's in the town of Gabrovo, Bulgaria (SZ REDA)" (GP6), with the first one (GP4) receiving the best score as very good practice (in detail in Annex A).

Next in line that received a lot of reviews were "Public letter, about the views of the local authorities on the conditions for the just transition, Slovenia (KSSENA)" (GP3) (8 reviews), and the "Shared self-consumption models for public buildings in Extremadura, Spain (AGENEX)" (GP1) (7 reviews).

It is worth mentioning that the ranking of the peer review process for all practices that received a review were "good" or "very good", with the majority considered to be "very good".

5 Summary of key points and lessons learnt

The transition towards a carbon-neutral economy is a fundamental change, since it involves not only transforming the energy sector but also radical reforms across the whole economy. Building a carbon-neutral economy in DeCarb regions is a coordination challenge requiring the simultaneous deployment of a collection of instruments and institutional changes. It questions the ways the local government, markets, stakeholders and citizens should work together in addressing these challenges.

A list of *objectives* that need to be met in order to achieve the transition, derived from the practices presented during the workshop include:

- ✓ **Reduce** energy consumption.
- ✓ Establish a functioning regional-level employment cooperation that will help to **improve the employment situation of people that lost their jobs** from phase out in the DeCarb regions, taking into account the needs of the labour market.
- ✓ Train, inform and raise **awareness** for citizens to completely understand and support the work of the local authorities **in the field of energy efficiency and RES**.
- ✓ Create a **legal framework** for energy communities.
- ✓ Enhance the **technical and financial capacity** of infrastructures.
- ✓ Set up and operate a **Just Transition Observatory** to ensure the objectivity on the basis of commonly agreed indicators and objectives, and also the legitimacy and acceptance of both strategic policies and specific investment plans.

Problems regarding citizens' involvement in the transition include:

- Lack of awareness of the problems and benefits of developing a low-carbon economy.
- Lack of knowledge of possible solutions.
- Public inactivity.
- Top-down governance model.
- Lack of trust in the consultation processes.
- High investment costs.
- Legal barriers.
- Lack of sufficient financial resources.

The *impacts* achieved by the aforementioned good practices are:

- **Environmental**: less energy consumed and more renewable energy produced,
- **Economic**: significant savings are achieved from an economic point of view, and

- **Social**: boost of community energy projects, creation of new jobs, contribution to sustainable development, offer an energy efficient environment, gain the trust and active involvement of the citizens.

Lessons learnt and discussion

1. To design and optimise fair, inclusive, and just energy transition pathways, it is a requirement to have suitable policy making, good collaborations between stakeholders, realistic business models, and citizens who play an active role in shaping and accelerating the energy transition. Citizens interact with the technical energy systems, since they are both the subject and object of social innovation in the energy society, and they are emerging economic actors in the energy markets[14].

2. Policies for the power sector need to take into account the decarbonising through (direct and indirect) electrification and the impacts on expected electricity demand, and at the same time support enhanced uptake of variable renewable energy sources in particular wind and solar.

3. Strengthening the role of civil society, taking into account how measures impact on all parts of society, and managing the transition in a way that ensures participation of affected regions in benefits for employment and income (just transition) are important success factors to ensure support for adequate climate policy. Enhancing synergies between green COVID-19 recovery and climate policy is another important element that can also be expanded and strengthened.

4. While the EU reserved significant resources for a Just Transition mechanism, the way these resources are spent depends to a large degree on the member states. The resources may be used in a way which only to a limited degree benefit those affected or the impact is limited in time, e.g. if the support is limited to generous, one-time-payments. Instead, governments and especially local authorities can learn from successful experiences of other countries and involve local communities in designing the respective transition strategies. While certain solutions may be common to most regions (e.g. early pensions, re-training, siting of new industries), they also need to be adapted to the specific circumstances. Most of all, designing the transition plans jointly with those affected both directly and indirectly will increase the ownership of the plans, and increase the chances of successful implementation.

[14] Lupi, C.C.; Almuni Calull, M.; Delvaux, S.; Valkering, P.; Hubert, W.; Sciullo, A.; Ivask, N.; Van der Waal, E.; Jimenez Iturriza, I.; Paci, D. A Characterization of European Collective Action Initiatives and their Role as Enablers of Citizens' Participation in the Energy Transition. Energies **2021**, 14, 8452.

5. Civil society should be involved in the process of phasing out one source of energy, but should also be playing an active role in phasing in its replacement. The extensibility of renewables creates many opportunities to involve members of civil society: starting from electricity generation from PV installations, through participation in the renewable energy cooperatives, to investments in large scale decarbonisation projects. Energy communities can also play an important role in coming up with ideas concerning the ways in which increasing shares of variable renewables can be balanced using storage, demand management, and sector coupling.

Overall, the EU approach of setting a combination of targets for greenhouse gas emission reductions, renewable energy and energy efficiency has been crucial to drive policy within the EU and the member states. Managing the necessary transition challenges upfront with proactive stakeholder engagement, just transition provisions, and financial and technical support for DeCarb regions is instrumental to achieving political and societal buy-in.

Annex A Table of peer review results

Good practice 1: Shared self-consumption models for public buildings in Extremadura, Spain (AGENEX)

	Review #1	Review #2	Review #3	Review #4	Review #5	Review #6	Review #7	
Relevance	5	5	4	4	5	5	3	
Range	5	5	4	4	5	5	2	
Feasibility	5	5	4	4	5	5	3	
Potential impact	5	5	4	5	5	5	3	
Transferability potential	5	5	4	5	5	5	3	
								Overall score
Total	25	25	20	22	25	25	14	**156**

Good practice 2: County-level Employment Pacts and National Calls for Proposals to Promote a Just Transition to the Labour Market (ENEREA)

	Review #1	Review #2	Review #3	Review #4	Review #5	
Relevance	5	5	4	5	5	
Range	4	3	3	5	5	
Feasibility	4	3	4	5	5	
Potential impact	4	4	4	5	5	
Transferability potential	4	5	4	5	5	
						Overall score
Total	21	20	19	25	25	**110**

Good practice 3: Public letter, about the views of the local authorities on the conditions for the just transition, Slovenia (KSSENA)

	Review #1	Review #2	Review #3	Review #4	Review #5	Review #6	Review #7	Review #8	
Relevance	4	4	5	5	5	5	5	4	
Range	2	4	5	5	5	5	5	4	
Feasibility	4	5	4	5	5	5	5	4	
Potential impact	3	5	3	5	5	5	5	5	
Transferability potential	4	5	4	5	5	5	5	5	
									Overall score
Total	17	23	21	25	25	25	25	22	**161**

Good practice 4: Consultancy support system for the public sector, housing and entrepreneurs in the field of energy efficiency and RES (Lodzkie region)

	Review #1	Review #2	Review #3	Review #4	Review #5	Review #6	Review #7	Review #8	Review #9	
Relevance	5	3	4	5	5	5	5	5	5	
Range	5	3	3	5	5	5	5	5	4	
Feasibility	5	4	5	5	5	5	4	5	4	
Potential impact	5	3	4	5	5	4	5	5	5	
Transferability potential	5	4	5	5	5	5	5	5	5	
										Overall score
Total	25	17	21	25	25	24	24	25	23	**209**

Good practice 6: Establishment of Two Energy Cooperation's in the town of Gabrovo, Bulgaria (SZ REDA)

	Review #1	Review #2	Review #3	Review #4	Review #5	Review #6	Review #7	Review #8	Review #9	
Relevance	5	4	5	4	5	5	4	4	4	
Range	4	5	4	4	5	5	4	4	5	
Feasibility	4	4	4	4	5	5	3	4	4	
Potential impact	5	5	4	4	5	5	3	4	4	
Transferability potential	4	3	5	3	5	5	4	4	4	
										Overall score
Total	22	21	22	19	25	25	18	20	21	**193**

Good practice 7: Establishment of Monitoring and Assessment Mechanism of Just Energy Transition (PEDDM) - Policy

	Review #1	Review #2	Review #3	
Relevance	5	5	5	
Range	5	5	4	
Feasibility	5	5	5	
Potential impact	5	5	5	
Transferability potential	5	5	5	
				Overall score
Total	25	25	24	74

Good practice 10: Citizen-involvement practices and resilient transitions through energy citizenship, South-West Oltenia Region, Romania (SW Oltenia region)

	Review #1	Review #2	Review #3	
Relevance	3	4	3	
Range	3	4	1	
Feasibility	5	4	5	
Potential impact	3	5	5	
Transferability potential	2	5	3	
				Overall score
Total	16	22	17	**55**

Annex B List of participants and photos of the second thematic session

DeCarb Interreg Europe
European Union European Regional Development Fund

SEZNAM UDELEŽENCEV (PARTICIPANTS LIST)

Naslov dogodka: **2 day physical workshop – 2nd thematic session on Resilient transitions through energy citizenship**
Lokacija: **Turistična kmetija Karničnik, Hrastovec 36, 3320 Velenje**

Datum: **20.09.2022**

Št./nr.	Ime/name	Priimek/surname	Organizacija/organization	E-pošta/e-mail	Podpis*/signature*
1.	Matevž	Šilc	KSSENA	matevz.silc@kssena.velenje.eu	
2.	Mojca	Plankelj	KSSENA	mojca.plankelj@kssena.velenje.eu	
3.	Boštjan	Krajnc	KSSENA	bostjan.krajnc@kssena.velenje.eu	
4.	Cosme	Segador Vegas	AGENEX	csegador@agenex.org	
5.	German	Botejara Sanz	AGENEX	—	— NOT PRESENT
6.	Rachel	Claire Tully	AGENEX	RCTULLY@AGENEX.NET	
7.	Mihaela	Dineva	SZREDA	mihaela@szreda.eu	
8.	Kostadin	Penchev	SZREDA	k.penchev@szreda.eu	
9.	Plamen	Ivanov	SZREDA	IVANOV.bodor@gmail.com	

*Skladno s Splošno uredbo EU o varstvu osebnih podatkov (GDPR) s podpisom dovoljujete uporabo osebnih podatkov za namene poročanja o izvedenih aktivnostih financerju. Vaše osebne podatke bomo uporabili izključno za namene lastnega poslovanja, to je, da se seznanimo, kdo se je dogodka/animacije sploh udeležil in da vas lahko glede dogodka še kontaktiramo (npr. pošljemo gradiva) in ker listo prisotnosti potrebujemo za potrebe poročanja financerju dogodka, to je ERDF (Evropski sklad za regionalni razvoj). Dostop do osebnih podatkov na listi prisotnosti bodo imeli tudi drugi državni ali evropski organi, ki izvajajo nadzor nad porabo javnih sredstev. Vaš vpis osebnih podatkov na skupno listo prisotnosti, ki kroži med udeleženci postopka, pomeni vaše soglasje, da se drugi udeleženci dogodka lahko seznanijo z njimi. V primeru, da ne želite, da drugi udeleženci vidijo vaše osebne podatke, se lahko podpišete na individualno listo prisotnosti na koncu dogodka.

DeCarb
Interreg Europe
European Union
European Regional
Development Fund

Št./nr.	Ime/name	Priimek/surname	Organizacija/organization	E-pošta/e-mail	Podpis*/signature*
10.	Lavinia	Cretu	SWORDA	lavinia.cretu@adrsudmuntenia.ro	
11.	Laura	Buzatu	SWORDA	LAURA.BUZATU@ADROLTENIA.RO	
12.	Bogumila	Grzelczak	LODZKIE REGION	bogumila.grzelczak@lodzkie.pl	
13.	Iwona	Marcinkowska	LODZKIE REGION	iwona.marcinkowska@lodzkie.pl	
14.	Marta	Azner	LODZKIE REGION	marta.azner@lodzkie.pl	
15.	Jaroslav	Janiak	LODZKIE REGION	jaroslaw.janiak@ugbrzezmin.pl	
16.	Lefteris	Topaloglou	PEDDM	ltopaloglou@lga.gr	
17.	Dimitrios	Theodoridis	PEDDM	dtheodoridis@lga.gr	
18.	Robert	Orosz	ENEREA	IRODAVEZETO@ENEREA.EU	
19.	Nandor	Csiky	ENEREA	info@enerea.eu	
20.	Alex	Sogaard Moreno	GREEN HUB DEN.	asm@aalborg.dk	

€ 1.54 M ERDF

Jun 2018 May 2023

*Skladno s Splošno uredbo EU o varstvu osebnih podatkov (GDPR) s podpisom dovoljujete uporabo osebnih podatkov za namene poročanja o izvedenih aktivnostih financerju. Vaše osebne podatke bomo uporabili izključno za namene lastnega poslovanja, to je, da se seznanimo, kdo se je dogodka/animacije sploh udeležil in da vas lahko glede dogodka še kontaktiramo (npr. pošljemo gradiva) in ker listo prisotnosti potrebujemo za potrebe poročanja financerju dogodka, to je ERDF (Evropski sklad za regionalni razvoj). Dostop do osebnih podatkov na listi prisotnosti bodo imeli tudi drugi državni ali evropski organi, ki izvajajo nadzor nad porabo javnih sredstev. Vaš vpis osebnih podatkov na skupno listo prisotnosti, ki kroži med udeleženci postopka, pomeni vaše soglasje, da se drugi udeleženci dogodka lahko seznanijo z njimi. V primeru, da ne želite, da drugi udeleženci vidijo vaše osebne podatke, se lahko podpišete na individualno listo prisotnosti na koncu dogodka.


DeCarb
Interreg Europe
European Union
European Regional
Development Fund
ession
nergy citizenship

Annex C Photos of the visits of the second day of the workshop


District heating in Denmark and Aalborg
85% of all houses in Denmark is connected to district heating. In Aalborg it's 81 % (some cities have 100 % depending on demography
District heating began in large-scale during the oil crisis in the 1970s
Industrial symbiosis since early 1990s
72 % of district heating is produced from renewables
410 000 households still depend on natural gas
District heating needs a number of houses/cosumers to be financial sustainable
Energy mix is, waste, biomass, wind, solar power, geothermal power, natural gas,
and surplus heat from industry
60 000 km of pipes
The 'district heating law': All district heat
companies are obliged to invest profit in
efficiency, convert to renewables a
the prices for the consumers
Energy mix in Aalborg = stron
symbiosis
MESTNA OBČINA VELENJE
OBČINA ŠOŠTANJ