Action Plan on the development of energy communities in Małopolska Voivodeship

"Support to the implementation of just transition in Poland"

Technical Support Instrument
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Reform and Investment Task Force
+32 2 299 11 11 (Commission switchboard)
European Commission
Rue de la Loi 170 / Wetstraat 170
1049 Brussels, Belgium

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List of abbreviations

Abbreviation	Full name
AGH	AGH University of Science and Technology
CHP	Combined Heat and Power
DSO	Distribution System Operator
ECs	Energy communities
ERDF	European Regional Development Fund
URE	Energy Regulatory Office
EU	European Union
ITI	Integrated Territorial Investments
JTF	Just Transition Fund
KOWR	National Support Centre for Agriculture (PL: *Krajowy Ośrodek Wsparcia Rolnictwa*)
KPT	Kraków Technology Park
MSA	Ministry of State Assets
MCE	Ministry of Climate and Environment
MDFRP	Ministry of Development Funds and Regional Policy
ME	Ministry of Energy
NGO	Non-Governmental Organisation
OSE	Citizen energy community (PL: Obywatelska Społeczność Energetyczna)
RED III	Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023
RES	Renewable Energy Sources
NRRP	National Recovery and Resilience Plan
TJTP	Silesian Territorial Just Transition Plan
TSI	Technical Support Instrument
UMWM	Marshal's Office of the Małopolska Region
WUP	Voivodeship Labour Office

Key definitions

1. **Distributed energy** is a decentralised model of energy generation, storage and management, based on local renewable sources and active community participation. It aims to meet energy needs in a way that is adapted to the conditions and possibilities of the area - municipality, district or region. In contrast to the traditional centralised energy system, distributed energy enables local actors - such as energy communities, energy clusters, energy cooperatives or collective or virtual prosumers - to cooperate in energy production, distribution and consumption. In this way, it promotes energy independence, increases resource efficiency and strengthens local resilience to energy crises.
2. **Energy communities (ECs)** in Poland operate based on legislation on Renewable Energy Sources and the Energy Law. Their main objective is to find appropriate ways to meet local energy needs. They can take various forms, such as energy clusters, energy cooperatives, citizen energy communities and collective or virtual prosumers. This Action Plan covers two types of energy communities: energy clusters and energy cooperatives.
3. According to Article 2(15a) of the Renewable Energy Sources Act (tj. Dz.U.2024 poz. 1361 with later amendments), an **energy cluster** is defined as a civil-law agreement between at least two entities, which may include: local government units (JST), counties (poviats), corporate entities, scientific institutions, NGOs, individuals. Following the 2024 amendment, the law now explicitly requires that local government units or municipal companies controlled by them must be parties to the cluster agreement. The operation area of an energy cluster should not exceed the boundaries of a single poviat or a maximum of five neighbouring municipalities. The purpose of the cluster can be the generation, distribution, storage, demand balancing, or trading of electricity, heat, or fuels.
4. **An energy cooperative** is a type of energy community whose scope of activity, conducted exclusively for its own benefit and that of its members, includes the generation of electricity, biogas, agricultural biogas, biomethane or heat in RES installations and balancing of the demand for electricity, biogas and heat. Currently, energy cooperatives can only be established in up to three neighbouring rural and urban-rural municipalities.
5. An **electricity seller** is understood as an entity engaged in the trading of electricity, which enters into sales agreements with end consumers. The seller is responsible for delivering electricity under commercial terms specified in the agreement, including financial settlements and customer service.
6. The **Distribution System Operator (DSO)** is an energy company that distributes electricity through a power grid with a voltage lower than 110 kV. The DSO is responsible for the technical aspects of electricity delivery, including the maintenance, operation, and development of network infrastructure, as well as ensuring the reliability and quality of supply. The DSO operates based on a license issued by the President of the Energy Regulatory Office (URE) and is obliged to provide equal access to the grid for all market participants.

Information about the document

This document presents an assessment of the current state of energy communities in the Małopolska Region and the key barriers hampering their development, together with a list of recommended actions to support their development in Małopolska, with particular focus on the Western Małopolska

area[1] . The document was prepared in the framework of the Technical Support Instrument (TSI) project "Support for the implementation of just transition in Poland", for the Ministry of Development Funds and Regional Policy and the Regional Development Department of the Marshal's Office of Małopolska Voivodeship (UMWM).

[1] The Western Małopolska area is defined according to the Silesian Territorial Just Transition Plan (TJTP) as the area comprising the of the following districts: olkuski, wadowicki, chrzanowski and oświęcimski.

1. Executive summary

Energy communities (ECs) will play an increasingly important role in the energy transition of Poland and the European Union. Their local character, based on cooperation between inhabitants, local governments, businesses and social organisations, allows for the decentralisation of the energy system, increasing the share of renewable energy sources (RES) and improving energy security, while creating financial and social benefits for local communities. Out of available models for ECs in Poland, this paper focuses exclusively on energy clusters and energy cooperatives.

In Poland, the development of ECs started in 2016[2] with the introduction of the notion of energy clusters into national law via the Renewable Energy Sources Act (PL: Ustawa o OZE), amended by the Act of June 22, 2016 (Dz.U. 2016 poz. 925). Since then, energy cooperatives, collective and virtual prosumers and a new form, the citizen energy community (PL: Obywatelska Społeczność Energetyczna, OSE), have also emerged. Although as of 2.9.2025 there is only one example of an OSE in Poland [3], other forms of ECs are gaining ground – as of 19.08.2025, 125 registered energy cooperatives[4] and approximately 300 energy clusters[5] exist, out of which 9 have already been registered in the URE registry[6]. The main financial support is provided by **the National Recovery and Resilience Plan, which has allocated PLN 845 million for investments and support activities for ECs**.

In Western Małopolska, ECs can become a key tool to drive an equitable energy transition in a region that has historically been linked to mining and conventional energy. There are currently 6 ECs initiatives in Western Małopolska (4 clusters and 2 cooperatives), but their development is limited by a number of barriers including:

- lack of a regional strategy for distributed energy coupled with the lack of a clearly defined mandate on distributed energy in the Marshal's Office of Małopolskie Voivodeship (UMWM),
- limited competence in the field of distributed energy,
- limited access to financing and changing legal regulations that do not correspond to the needs of the energy communities,
- lack of knowledge and education on RES and distributed energy,
- untapped potential of local partners (e.g. enterprises, industrial zones, hospitals, housing associations),
- difficulties in dialogue with the distribution system operator (DSO) (Tauron Dystrybucja S.A.).

The identified list of barriers does not include technological and technical needs related to the modernization of the energy system, the integration of RES installations, or monitoring—this area falls outside the scope of this project and is comprehensively described in other reports. At the same time, the region has significant potential: existing energy communities and engaged stakeholders with social, technical and financial capital. The project mapped more than 100 hitherto uninvolved but potentially key stakeholders, including, among others, businesses, NGOs, community leaders, public

[2] Although the first local energy initiatives began to emerge as early as around 2011, they did not yet have formal legal frameworks.

[3] https://bip.ure.gov.pl/bip/rejestry-i-bazy/wykaz-obywatelskich-spolecznos/4707,Wykaz-obywatelskich-spolecznosci-energetycznych.html, accessed on 2.9.2025 r.

[4] Registry by the National Support Centre for Agriculture: Wykaz spółdzielni energetycznych - Krajowy Ośrodek Wsparcia Rolnictwa - Portal Gov.pl, accessed on 27.08.2025

[5] There is no formal list of clusters that are not registered in the URE (Energy Regulatory Office) register. This is informal information from the industry, based on conversations with experts during consultation workshops.

[6] Rejestr Klastrów Energii - BIP - Urząd Regulacji Energetyki, accessed on 27.08.2025

administration institutions, large energy producers, research institutions, business support institutions and housing cooperatives.

This **Action Plan**, developed with the support of the European Commission (SG REFORM), aims to support the development of ECs in Małopolska by proposing:

- legislative and regulatory changes,
- adjustment of financial and non-financial support programmes,
- competence building and intersectoral cooperation,
- educational and information activities.

Recommendations included in the Action Plan were developed in response to identified barriers and needs of energy communities in Małopolska, with particular emphasis on the Western Małopolska region. The document is based on an analysis of barriers, consultations with 12 energy communities and experts in Małopolska, stakeholder mapping, written consultations and on-site workshops with stakeholders and a review of good practices. The main addressees of the Plan are the Ministry of Climate and Environment (MCE), the Ministry of Development Funds and Regional Policy (MDFRP), the newly established Ministry of Energy (ME), UMWM and local stakeholders.

At the national level, the most important recommendation is to clarify the legal framework for the operation of ECs, including rules for cooperation with Distribution System Operators (DSOs) and functioning aspects of new ECs forms. It is also important to allow communities to provide flexibility services, i.e. adapting energy consumption to the needs of the grid. Local stakeholders repeatedly stressed the need to increase the availability and transparency of financial support programmes, including the continuation of grants at the preparatory stage of initiatives, the offering of long-term support and the launch (of a support system) for regional local energy competence units (see below). The need for a central information platform to gather up-to-date information on available support instruments, model documents and legal interpretations was also identified.

At the regional level, the most important demand is the creation of the Małopolska Centre for Local Energy Development, a unit that would act as a regional competence centre. This centre would coordinate activities between the Marshal's Office and Local Self-Government Units, support municipalities and counties in RES investment planning, monitor the state of local energy development and organise a platform for exchange of knowledge and good practices. Recommendations for the regional level also include the launch of an advisory unit for municipalities and counties on the topic as well as the inclusion of this topic in the planning documents of the voivodeship and regional development strategies. The need to actively involve the DSO in the development of an educational and training offer in this area, and in the implementation of local energy projects was also emphasised.

At the local level, the recommendations focus on building awareness and competence among residents and local government representatives. The organisation of study visits and educational workshops, the promotion of good practices and energy community models, and the engagement of local leaders are recommended. The need to create partnerships between local governments, business and communities and to support bottom-up initiatives through energy community incubators was also pointed out. Particular attention was paid to the need to provide sustainable competence support to local communities, including through the development of sub-regional advisory services and the use of existing structures, such as the climate and environment advisors funded by the LIFE EKOMAŁOPOLSKA project.

Of all the recommendations contained in this Action Plan, particular importance is given to the creation of **the Małopolska Centre for Local Energy Development,** an entity that would become a sustainable pillar supporting the development of distributed energy in the region. This centre would not be just another administrative unit, but a strategic coordination point, combining knowledge, practice and strategic steering in one place. **Its role would be to ensure coherence of activities between different levels of administration, to support local initiatives, to build competence and support networking across the province.**

The centre would have the function of coordinating, collecting data on the state of local energy development, good practices and available support, supporting municipalities and counties in planning complex RES investments, providing educational materials and tools, as well as organising regular meetings and exchange of experiences between energy communities. Its task would also be to support the implementation of dedicated regional and national actions, as well as to respond to the changing needs of local stakeholders.

For the Centre to function effectively, support will be needed at national level, both regulatory and financial, for enabling its financing and operation. At the same time, the involvement of regional authorities will be essential for its institutional embedding (the establishment of the Centre falls within the competence of the board of the voivodeship) and provision of operational resources. Equally importantly will be the active participation of local communities, local governments, businesses and research centers in order to giving the Centre a real advisory and networking function, responding to the real needs of the region.

The recommendation to create the Małopolska Centre for Local Energy Development is not only a response to the identified barriers. It is first and foremost a recommendation to invest in the region's ability to lead the energy transition in a sustainable manner, based on local potential and cross-sectoral cooperation. This Centre may become a model for other provinces and a foundation for Małopolska's long-term energy policy.

2. Introduction

This chapter describes the context for the development of energy communities in the European Union, Poland, particularly in Małopolska and the objectives of the Action Plan.

The role of energy communities in the context of EU and national initiatives

The role of energy communities (ECs) in achieving a more secure, affordable and cleaner energy system for Europe, is recognized across the European Union on all governance levels.

Since the beginning of 2019, the *Clean Energy Package for All Europeans*[7] gives power to citizens to take ownership of energy transition through ECs. Through this regulation the EU introduced the concept of ECs in the legislation and asked European countries to actively support the creation of such projects. The Renewable Energy Directive of 2018/2001 (known by the acronym RED) on the promotion of the use of energy from RES enabled Member States[8] further promotion of ECs, for example via art. 22 (4) stating that 'Member States shall provide an enabling framework to promote and facilitate the development of renewable energy communities'. The latest amendment of this Directive from 2023 (RED 2023/2413[9], known as RED III) did not bring any changes in the area of ECs. However, RED III laid down obligations for Member States to define special areas, in which streamlined permitting processes would apply to RES investments (so called 'RES Acceleration Areas').

Poland recognises the development of ECs as one of the main avenues of the energy transition in the National Energy and Climate Plan in *Objective. 4.4.2. Development and integration of local energy communities*, which includes announcements of legal and administrative improvements, as well as investment support and an improved permitting procedure.[10] The main financial tool for energy communities has been introduced in the current version of the National Recovery and Resilience Plan (PL: KPO), dedicating PLN 845 mln to investment and pre-investment support for such initiatives through measure B2.2.2 (RES installations realised by ECs) and G1.1.2 (Support for development of ECs).

The development of ECs in Poland has been ongoing since 2016[11], when the concept of energy clusters was introduced in the Polish law via the Renewable Energy Sources Act (PL: Ustawa o OZE, Dz.U. 2016 poz. 925). In 2017, the then Ministry of Energy (now the Ministry of State Assets) announced a call for applications from energy cluster initiatives seeking certification as pilot energy clusters. As a result, 115 applications were submitted, and 33 clusters were awarded the certificate.[12] Since then, new organizational forms for ECs have been introduced, and the relevant regulations have been continuously updated with new operational rules for these projects to address the needs and align the national law with the EU law. As of 2025, the legal framework regulating the operation of energy communities in Poland consists primarily of the Renewable Energy Sources Act of 20 February 2015, the Energy Law – in particular Chapter 2e concerning citizen energy communities, the Cooperative

[7] https://eur-lex.europa.eu/legal-content/PL/TXT/HTML/?uri=CELEX:52016DC0860(01), accessed on 2.9.2025.
[8] https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32018L2001, accessed on 2.9.2025
[9] https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=OJ:L_202302413, accessed on 27.08.2025
[10] Latest draft submitted to the EC in March 2024 is available here: Poland - Draft updated NECP 2021-2030 - European Commission, accessed on 2.9.2025.
[11] Although the first local energy initiatives began to emerge as early as around 2011, they did not yet have formal legal frameworks.
[12] Wyniki I Konkursu na Certyfikat Pilotażowego Klastra Energii - Ministerstwo Aktywów Państwowych - Portal Gov.pl, accessed on 2.9.2025

Law, the Act on Farmers' Cooperatives, and the Act on Wind Farm Investments.[13] There are several possible organisational structures in Poland that enable the development and ownership of RES projects, production and even sale of energy by the local community, which may consist of, among others, representatives of local self-government units, entrepreneurs and individuals. These are mainly energy cooperatives, energy clusters, collective and virtual prosumers, a virtual power plant with an aggregator in the form of a cooperative, and the newly introduced form of 'citizen energy community' which was inscribed in the law in 2023 (PL: Obywatelska Społeczność Energetyczna, OSE). The popularity of these models is growing - as of 19.8.2025, 125 energy cooperatives were registered in the official registry of energy cooperatives[14] , and informal data from industry estimates the number of energy clusters is around 300. As of 27.08.2025, 10 energy clusters (operating under the new rules introduced by the amendment of the RES Act in 2023) were registered in the register of the Energy Regulatory Office (URE)[15]. As of the 2.9.2025, there is one example of an OSE registered[16]. This handbook focuses on aspects related to **energy clusters and energy cooperatives,** which presently constitute the majority of energy communities in Poland.

The Ministry for Climate and Environment currently holds most of the responsibilities for updating the relevant legislation and managing the support schemes for ECs. Among others, it has commissioned the development of 'Strategy recommendations for distributed energy in Poland until 20240' by KlastER in 2022.[17] In September 2024 the Ministry of Climate and Environment published an analysis on the legislative and administrative barriers for the development of ECs in Poland[18]. Both documents have been consulted for the preparation of the underlying Action Plan.

State of energy communities in Małopolska

The Regional Action Plan for Climate and Energy [19] for Małopolskie Voivodeship emphasises the role and potential of local energy production from RES, mentioning distributed energy and energy communities, but the strategic documents at the provincial level do not contain specific targets focusing on the development of local energy initiatives. The regional program 'European Funds for Małopolska 2021-2027'[20] describes specific strategies for ECs. Within Priority 2: European Funds for the Environment, specific objective 2(ii) emphasizes that RES development support will cover projects implemented through ECs, with particular emphasis on the role of local government units (particularly municipalities and associations of municipalities).

The EU-funded LIFE EKOMAŁOPOLSKA project, delivered by the Marshal's Office with partners, has produced a handbook on ECs, provided a series of trainings and established 4 climate and environmental advisors at sub-regional level and 25 advisors at the regional level. In 2021, online meetings were organized for local government units on the legal aspects of establishing energy

[13] References in Polish to respective legislation: Ustawa z dnia 20 lutego 2015 r. o odnawialnych źródłach energii (Dz. U. 2015 poz. 478), nowelizacja z dnia 27 listopada 2024 r.; Ustawa z dnia 10 kwietnia 1997 r. Prawo energetyczne (Dz. U. 1997 Nr 54 poz. 348), nowelizacja z dnia 7 września 2023 r.; Ustawa z dnia 16 września 1982 r. Prawo spółdzielcze (t.j. Dz.U. 2024 poz. 593); Ustawa z dnia 4 października 2018 r. o spółdzielniach rolników (Dz.U.2024.372 t.j.); Ustawa z dnia 20 maja 2016 r. o inwestycjach w zakresie elektrowni wiatrowych (Dz. U. 2016 poz. 961)

[14] List of energy cooperatives - National Agricultural Support Centre - Gov.pl Portal, accessed on 2.9.2025

[15] Register of Energy Clusters - BIP - Energy Regulatory Office, accessed on 2.9.2025

[16] https://bip.ure.gov.pl/bip/rejestry-i-bazy/wykaz-obywatelskich-spolecznos/4707,Wykaz-obywatelskich-spolecznosci-energetycznych.html, accessed on 2.9.2025

[17] Strategia rozwoju energetyki rozproszonej - Ministerstwo Klimatu i Środowiska - Portal Gov.pl, accessed on 2.9.2025

[18] Analiza barier utrudniających rozwój społeczności energetycznych - Ministerstwo Klimatu i Środowiska - Portal Gov.pl, accessed on 2.9.2025

[19] https://bip.malopolska.pl/umwm,a,1739093,uchwala-nr-22820-zarzadu-wojewodztwa-malopolskiego-z-dnia-18-lutego-2020-r-w-sprawie-przyjecia-regio.html, accessed on 2.9.2025

[20] https://fundusze.malopolska.pl/sites/default/files/2023/09/3317/Program-FEM-2021-2027.pdf, accessed on 2.9.2025

clusters and energy cooperatives, the principles of establishing such projects and comparing energy cooperatives and clusters. During the meetings, participants learned step-by-step principles for establishing clusters and cooperatives, information on support systems, rules for creating contracts, participation, etc. The materials can be found at: https://klimat.ekomalopolska.pl/. The workshops continued in the spring of 2025, where participants discussed a case study during an in-person meeting concluding the online lecture series, and were able to ask more detailed questions. Over 100 participants participated in the 2025 training sessions. However, no specific targets or plans have been developed at regional level to support the development of ECs in the region. Below we summarise key challenges for the development of distributed energy in Western Małopolska identified during a fact-finding visit to the region in January 2025, which informed the development of the Action Plan:

- **Lack of a regional strategy clarifying development goals for distributed energy.** As mentioned above, the lack of such a strategy makes it difficult to specify actions that could support the pursuit of specific goals for the development of ECs in the region. Until the beginning of 2025 there was no inventory of ECs in Małopolska, nor a dataset of institutions, organisations and stakeholders that could play a significant role in the development of these communities. Such an inventory was created as part of the project described in this report.

- **Lack of a clearly defined mandate for the Marshal's Office of the Małopolska Region in the area of distributed energy.** Various departments in the Marshal's Office have a point of contact on the topic of distributed energy, but there is no clearly defined mandate. The topic of energy communities has not previously been addressed by any specific department in the Marshal's Office. As a result, there is no clear mandate to focus on this topic, leading to a dispersion of responsibility, information and resources.

- A similar **dispersion of responsibilities is evident at the national level**. The lack of clear legislation defining the tasks and competences of public administrations at all levels in the field of distributed energy is an additional barrier (information on barriers is described in chapter 5 Barriers analysis).

- **Energy communities in Western Małopolska have so far included only local government units as their participants** (no enterprises or residents), **their location is not planned based on the RES potential of areas or buildings owned by municipalities.** Currently, there are 4 energy clusters and 2 cooperatives in Western Małopolska, which involve only local self-government units and include installations on buildings owned by municipality or poviat. At the same time, more than 60 stakeholders have been identified in the same region, including carbon-intensive companies, companies investing in renewable energy sources, hospitals and parishes with access to areas for investment, and housing and social cooperatives, which have not been involved in any distributed energy projects so far, but which could become key partners in the development of such projects.

- **Dialogue with the distribution system operator**, Tauron Distribution, and the electricity sellers is proving challenging for most initiatives, and is sometimes perceived as not available or possible, with uncertainties and questions ranging from difficulties in energy billing to refusal of grid connection.

Objectives of the Action Plan for the development of ECs in Małopolska

The main objective of the Action Plan is to support the development of ECs in Małopolska by proposing actions that address identified barriers and foster the involvement of local stakeholders. The Plan includes recommendations in four areas: 1) legislative-regulatory recommendations; 2) recommendations in the area of programming of financial support; 3) recommendations for competence building and cooperation; and4) educational-informational recommendations. Key recommendations include:

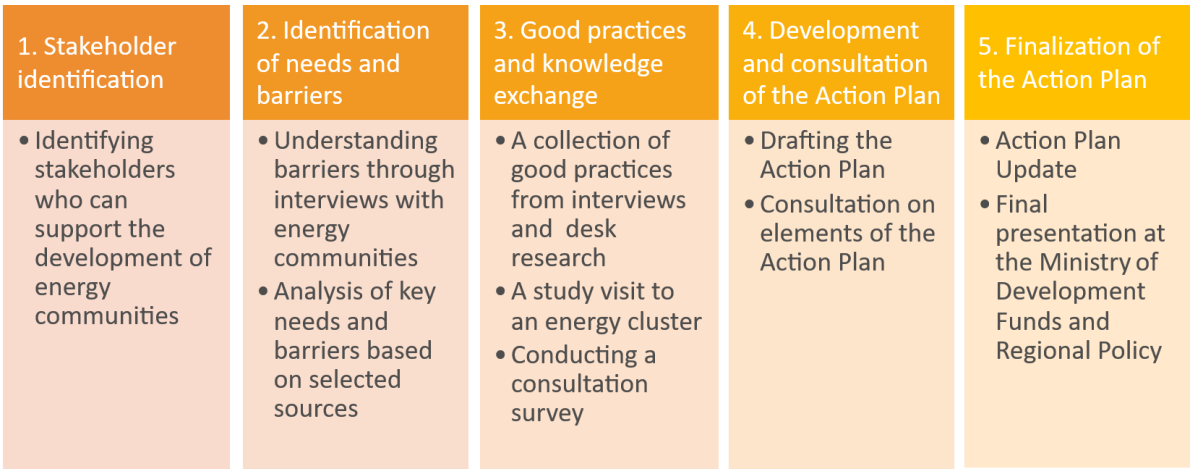
- identifying what legislative changes and financial support are needed in response to specific barriers and EC experiences in Małopolska,
- addressing the lack of capacities as well as resources in the public administration, as well as the technical skills needed to develop energy communities in the region,
- creating a set of practical actions and tools for the Marshal's Office of the Małopolska Region, which can be used to adapt support programmes to the needs of energy communities, to empower local communities and to monitor the development of distributed energy,
- identifying the role that can be played by NGOs, research and development centres, training centers for renewable energy specialists, as well as experts on the topic in the development of ECs.

Chapter 3 Methodology describes the process of developing the Action Plan and the research techniques used in this work. Chapter 4 Stakeholder analysis presents the results of the stakeholder mapping. Chapter 5 Barrier analysis provides a summary of the barriers and a description of the most important ones. Recommended actions addressing the barriers including their addressees are described in chapter 6 Proposed actions. Chapter 7 Conclusions provides a summary of the project results and this document. In addition, Annex - case studies of energy communities contain three case studies on ECs, aimed at disseminating knowledge on best practices.

3. Methodology

This chapter describes the methodology used by the project to develop the Action Plan. The graphic below shows the individual steps in the process of developing the Action Plan.

Figure 1: Action Plan development process



3.1 Stakeholder identification

The first preparatory step in the development of the Action Plan was to identify relevant stakeholders who could be involved in the project through, among other things, participating in a survey and being invited to take part in a consultation workshop. The stakeholder map is intended to serve the Marshal's Office as a repository of key contacts and may be useful during the implementation of the recommended actions. The mapping focused primarily on local stakeholders in the districts (poviats) listed below and municipalities located on the territory of these districts. The analysis also included ECs and key experts from across the province and even stakeholders at the national level. Most of the identified stakeholders are based in the following districts, which make up the area of Western Małopolska:

- District of Olkusz
- District of Wadowice
- District of Chrzanów
- District of Oświęcim

Data on stakeholders was collected from interviews with representatives of ECs[21], a registry of medium-sized fuel combustion sources[22] , reports and registers provided by the Energy Regulatory Office (URE)[23], public databases[24] and publicly available online sources. The criteria used to identify stakeholders, and the results of this process are described in chapter 4 Stakeholder analysis. The resulting Excel database is meant to be a 'living document', which should be updated periodically beyond the duration of this project.

[21] Within the context of this study, representatives of ECs in Małopolska were interviewed.

[22] Register of medium fuel combustion sources, accessed on 2.9.2025

[23] The President of the Energy Regulatory Office publishes the report "Thermal power industry in numbers" - News - Energy Regulatory Office, accessed on 2.9.2025

[24] Including Ogólnopolski Związek Rewizyjny Spółdzielni Socjalnych, accessed on 2.9.2025, and public lists of district hospitals and educational institutions.

The stakeholder mapping included also the collection of data on existing ECs in the region. Currently, the list of energy cooperatives is published by KOWR, but there is no comprehensive official registry of energy clusters (not registered in the URE registry).[25] As a result, 11 energy cooperatives (including one in liquidation and one only registered in Małopolska but operating outside its borders) and 9 energy clusters in Małopolska were mapped, including 1 cooperative and 4 clusters in Western Małopolska, respectively[26]. This mapping was the basis for the interviews conducted to analyse the barriers, described in the next subsection.

3.2 Identification of barriers

The basis of the Action Plan is an analysis of barriers, carried out based on analysis of available documents and a series of interviews with ECs. Barriers hindering the development of ECs were initially identified from industry reports[27] and policy documents, for example the 'Strategy recommendations for distributed energy in Poland until 20240', prepared by KlastER for the Ministry of Climate and Environment. The list of more than 30 barriers identified on this basis includes barriers such as lack of access to finance or adequate support for ECs at early development stage[28] or lack of knowledge and education on RES and distributed energy as well as good practices[29]. The list of barriers was revised after interviews with 12 energy communities from Małopolska (7 clusters, 5 energy cooperatives).

The interviews were conducted in a structured manner, using an interview template shared with the respondents in advance. In some cases, respondents chose to send written answers instead of scheduling an online interview. The interview questions consisted of an introductory section to gather data on the energy community in question, followed by questions on barriers and challenges encountered, and questions on best practices.. The table below lists the ECs interviewed.

Table1: List of energy communities interviewed

Energy cooperative "Optimal Energy"
Energy cooperative "Green Energy"
Energy cooperative Olkusz - Silver City
Energy cooperative of the Dobczyce Municipality
Energy copperativeSkawina
Trzebinia Energy Cluster
Tarnów Green Ring Energy Cluster
Heart of Podhale Energy Cluster
Renewable Energy Cluster Turystyczna Podkowa
Chrzanów Poviat Energy Cluster
Olkusz Poviat Energy Cluster
Kotlina Oświęcimska Energy Cluster

Based on the information from the interviews, the main barriers reported by the respondents were extracted and compared with those identified during the desk research stage. The barriers were

[25] A list of energy cooperatives is published here: List of energy cooperatives - National Agricultural Support Centre - Gov.pl Portal, accessed on 2.9.2025, but there is no comprehensive list of energy clusters (not registered in the Energy Regulatory Office's inventory).
[26] As of 10 July 2025.
[27] For example, *Energy Communities: A Compendium of Knowledge*: https://www.energetyka-rozproszona.pl/media/ckeditor/2022/12/29/spoecznosci-energetyczne-kompendium-wiedzy-idea-ncbj-202210_2-1.pdf, accessed on 2.9.2025. *Case Study: How Energy Community Coalitions are formed?:* https://beyondfossilfuels.org/wp-content/uploads/2024/05/energising-communities-en.pdf, accessed on 2.9.2025.
[28] Community-Energy-Guide-update-2024-1.pdf, accessed on 2.9.2025
[29] https://www.hub.coop/wp-content/uploads/2023/12/Power-to-the-People.pdf, accessed on 2.9.2025

ranked according to the number of their mentions. Finally, 22 barriers were selected for the final list presented in chapter 5 Barrier analysis of this report. It should be noted that technological barriers are beyond the scope of this project.

3.3 Good practices and knowledge sharing

The knowledge exchange encompassed three elements: the development of three best practice case studies presenting initiatives from outside the region, the organisation of two study visits and the presentation of two practices at a consultation workshop.

Analysis of good practices

Annex - case studies of energy communities includes an overview of the three case studies developed for this project. These practices present ECs from outside the region: Lądek-Zdrój Energy Cooperative in the Dolnośląskie voivodeship, Słupsk Bioenergy Energy Cluster in the Pomorskie voivodship and Oława Energy Cluster in the Dolnośląskie voivodship. The examples include a description of the EC, information about the structure of the initiatives and its members, the objectives of the initiative, aspects on financing, benefits for the region and the community, project impacts and information about technologies. The good practices were developed in collaboration with representatives of these initiatives and distributed at consultation workshops in the region. The selected projects deliberately complement the list of projects included in the study visit (see below) and projects representatives of which were invited as speakers to the consultation workshops (the Energy cooperative Skawina and the Tarnów Green Ring Energy Cluster).

Study visits

The project organised two knowledge exchange study visits with representatives from initiatives from outside Małopolska: a visit to Gliwice Energy Cluster and a webinar with the Energy Cluster in Bielsko-Biała.

The exchange in Gliwice, attended by 18 people, including representatives of the Ministry of Development Funds and Regional Policy, local governments and EC project leaders from Western Małopolska, was an opportunity to discuss the experiences related to the initiative operating under the new rules for energy clusters and registered in the URE registry. The exchange also included a practical workshop aimed at discussion of barriers and potential solutions between participants. The event took place on 2 June 2025 at the Silesian Logistics Centre.

In addition, a webinar was organised for 10 representatives of local self-government units from Western Małopolska on the topic of the Bielsko-Biała Energy Cluster, which is currently in the phase of preparing the cluster‘s development strategy. Its aim is development of distributed energy in the city and improving local energy security, while ensuring economic efficiency and environmental friendliness. As part of the webinar, participants had the opportunity to ask questions about the development of ECs to representatives of the Regional Development Agency SA in Bielsko-Biała.

3.4 Development and consultation on the Action Plan

Conducting a consultation survey

The identified stakeholders (approximately 130) were invited to take part in an online survey. The survey was designed to identify the barriers, interests, needs and potential stakeholder input to ECs’ development in Western Małopolska. Results of the survey were used to complete the analysis of barriers described above and develop proposed actions. In addition, stakeholders were informed about the planned consultation workshop and encouraged to participate.

Development of the Action Plan

The recommendations presented in Chapter 6 Proposed Actions are based on the analysis of the identified barriers. The recommendations were consulted with other postulates formulated by experts from Małopolska[30].

Consultation on the Action Plan

The proposed recommendations were presented at a consultation workshop on 8 July 2025 at the Kraków Technology Park. The purpose of the consultation workshop was to gather opinions on the proposed actions and to identify key stakeholders who can play a role in the implementation of the recommendations. The event also aimed to create a space for the exchange of experiences between ECs representatives and experts in the field. In addition, the workshop served to encourage stakeholders from Western Małopolska to become actively involved in the development of distributed energy. The event included those stakeholders who have not been fully engaged thus far but which have been identified as important for the further development of energy communities in the region.

Participants had the opportunity to comment on the recommendations, select the most important actions, and offer additional suggestions. The workshop was attended by 37 people representing local governments from the Małopolska voivodeship, energy communities, experts, scientific organisations (e.g., AGH, Jagiellonian University, Mineral and Energy Economy Research Institute of the Polish Academy of Sciences, Wrocław University of Environmental and Life Sciences), companies (including energy companies) and the Marshal's Office. After the workshop, the draft recommendations were updated based on the comments received.

3.5 Finalisation and dissemination of the Action Plan

The final Action Plan takes into account the feedback from stakeholders, as well as the Ministry of Development Funds and Regional Policy, the European Commission and other coal regions in Poland. The final Action Plan was presented at a two-day workshop in Warsaw, hosted by the Ministry of Development Funds and Regional Policy.

[30] Including Strategy for the Development of Distributed Energy in Poland until 2040, accessed on 2.9.2025, developed by the Klaster for the MCE; Strategy with recommendations after the 2nd Distributed Energy Congress: Recommendations from Organisations Developing Distributed Energy, accessed on 2.9.2025; and the report 'Energy for Małopolska' created by the Krakow Technology Park (KPT) team working on cooperation with local self-government units - the report is available to view on request after consultation with KPT.

4. Stakeholder analysis

4.1 Description of the mapping process

As part of the project, a stakeholder mapping exercise was carried out to identify the key actors in the development of energy communities in Małopolska. The resulting database is intended to serve as a repository of contacts for local self-government units with stakeholders and to facilitate their involvement in public consultation, planning and project development. The data on stakeholders was collected from interviews with energy communities, the register of medium fuel combustion sources[31], reports and registers provided by the Energy Regulatory Office[32] , public databases[33] and publicly available online sources.

The stakeholder map mainly includes stakeholders from the Western Małopolska (the territory defined for the purpose of implementing the Just Transition Fund), but energy communities and key experts from across the voivodeship were also included in the analysis. During the mapping the following stakeholder categories were considered:

- enterprises
- NGOs
- energy community leaders
- public administration institutions
- energy providers
- research institutes
- business environment institutions
- housing cooperatives
- others (e.g. hospitals, parishes)

Table 2 shows the criteria, on basis of which the stakeholders were identified.

Table 2: Criteria used to classify stakeholders

Criterion	Description
Interest in the development of energy community projects	Stakeholders particularly interested in realising EC projects, e.g. due to previous involvement in similar initiatives, plans to develop significant RES generation capacity, need to reduce emissions (energy intensive industry, public authorities).
Companies with high emissions or energy consumption	Companies with high emissions that are subject to the ETS and therefore have a high incentive to decarbonise or have high electricity and/or heat consumption.
Technical/resource potential	Private sector stakeholders with technical resources to develop EC projects. These stakeholders may or may not be located in Western Małopolska, i.e. these may be companies with headquarters in another part of Poland that may be interested in developing projects in Western Małopolska. Stakeholders with characteristics that support the development of RES projects, such as technical expertise, availability of suitable land, access to renewable energy sources. Large stakeholders, e.g. hospitals, water and sewage companies, forestry authorities, trading houses, railway companies.
Previous RES activities and investments	Already demonstrated activities in establishing energy community projects and/or related relevant activities, e.g. development of RES projects. The Energy Regulatory Office register was consulted to develop this list.

[31] Register of medium fuel combustion sources accessed on 2.9.2025

[32] The President of the Energy Regulatory Office publishes the report "Thermal power industry in numbers" - News - Energy Regulatory Office accessed on 2.9.2025

[33] Including Ogólnopolski Związek Rewizyjny Spółdzielni Socjalnych , accessed on 2.9.2025, and public lists of district hospitals and educational institutions.

Interest in developing projects with community benefits	Interest and/or knowledge in developing and/or coordinating projects with community benefits. Knowledge of local stakeholders. Trusted community leadership. Example: social cooperatives, community centres, local action groups, housing associations, NGOs.

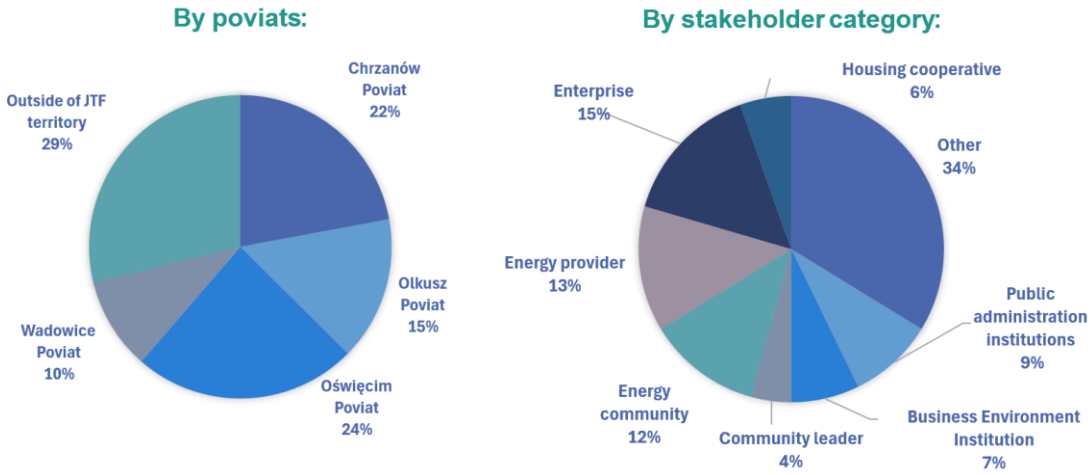
Stakeholders were categorised into primary and secondary stakeholders. The criteria for establishing this categorisation are as follows:

- **Primary stakeholders** meet one or more of the above criteria.
- **Secondary stakeholders** are stakeholders who do not meet the criteria above but may have an interest in supporting (e.g., academic experts) or buying energy from energy communities (e.g., potential customers such as utilities, churches, parishes, etc.). Experts with knowledge of ECs but not necessarily involved in project implementation also fall into this category. Stakeholders from outside Western Małopolska were also included in this group.

4.2 Mapping results

182 stakeholders were mapped, including 134 primary stakeholders. The following graphic illustrates the distribution of primary stakeholders by: i) poviats and ii) types of stakeholders.

Figure 2: Distribution of foreground stakeholders by: i) poviats (left) and ii) types of stakeholders (right)



As described in Chapter 3 Methodology, the stakeholder database was used to invite stakeholders to co-create and consult on the Action Plan. The mapping is intended to assist the Marshal's Office of the Małopolska Region in the long term in identifying and involving potential partners for the development of distributed energy in Western Małopolska.

5. Barrier analysis

A key preparatory step for the Action Plan was the elaboration of barriers inhibiting the optimal development of energy communities in Western Małopolska. The analysis was initiated by collecting data on existing ECs in the region. As a result, 11 energy cooperatives (including one in liquidation and one only registered in Małopolska but operating outside its borders) and 9 energy clusters in Małopolska were mapped, including 1 cooperative and 4 clusters in Western Małopolska, respectively.

The analysis of barriers was based on literature and interviews with energy clusters and energy cooperatives. After consulting the available reports, a list of barriers (more than 30) was identified, which was then revised based on interviews with 12 energy communities in Małopolska to select the most relevant barriers experienced by actors from the region. The updated list of key barriers includes 22 items, which are summarised in Table 3 below.

The barriers have been grouped into five categories:

- Economic-financial barriers;
- Legislative-regulatory barriers;
- Administrative-organisational barriers;
- Socio-cultural barriers;
- Other.

The numbers assigned to the barriers correspond to the frequency with which a given barrier was mentioned during interviews, for example, as can be seen in the table below, barrier B1 is the most frequently mentioned barrier in the interviews and barrier B22 was not mentioned in any of the interviews. The barriers are divided into two columns in the table below, depending on the frequency of mentions:

- the column “frequently indicated barriers” shows barriers with 3 or more mentions,
- the column “infrequently indicated barriers” shows barriers with 2 or fewer mentions.

The highest number of mentions of the same barrier is 7. The identified list of barriers does not include technological and technical needs for modernisation of the energy system, integration of RES installations (e.g. smart meters), or monitoring - this area is comprehensively described, for example, in the Strategy for the Development of Distributed Energy in Poland until 2040 developed by KlastER for the Ministry of Climate and Environment.

Table 3: Barriers hampering the development of energy communities in Małopolska

Barrier type	**Frequently indicated barriers** (i.e. 3-7)	**Infrequently indicated barriers** (i.e. 0-2)
Economic-financial	**B1** Access to finance/lack of adequate support for early-stage communities/lack of investment support **B9** Large initial investment needs	**B20** Insufficient funding for investment activities to upgrade existing distribution network[34]

Administrative-organisational	**B2** Requirement of diverse competencies within the energy community **B3** Difficulties in cooperation with DSOs **B5** Limited capacity and knowledge on the part of public administration in the field of distributed energy, including support programming / or unclear division of responsibilities[34] **B7** Administrative challenges	**B13** Difficulties in coordinating initiatives **B14** Lack/refusal of grid connections/need to wait for grid development[34] **B16** Difficulties in the process of municipalization of post-mining areas
Socio-cultural	**B4** Low awareness and interest in RES[34] **/** Local opposition to renewable energy sources **B8** Lack of knowledge and education on RES and distributed energy as well as good/bad practices[34]	**B11** Lack of technical experts[34] and local leaders **B15** Unclear benefits of energy communities compared to individual prosumer[34] **B17** Difficulties in finding land for investment/ difficult geographical conditions **B22** Lack of interest from large utilities and energy companies/ unfavourable perception from the commercial energy industry
Legislative-regulatory	**B6** Incomplete/changing legislation/not fully responsive to needs[34]/lack of consolidated and up-to-date guidelines, interpretations and recommendations	**B12** Lack of legal personality of energy clusters which causes difficulties in signing contracts and obtaining funding[34] **B18** New rules for the operation of clusters regarding fee reductions: requirement of 50% coverage of energy consumption from RES every hour. **B21** Complicated and lengthy administrative procedures related to RES investments, including obtaining a building permit for larger installations[34] and lack of possibility to combine old investments with new ones.
Other		**B10** Difficulties in planning biomass energy investments **B19** The need for advanced monitoring and automation systems

Description of main barriers

This section provides detailed descriptions of the nine main barriers identified from the table above. Only those barriers that were most frequently mentioned by stakeholders are described in detail and are outlined below in order of number of mentions (most significant barrier described first).

[34]The barrier was also identified in the Strategy for the development of distributed energy in Poland until 2040, accessed on 2.9.2025, developed by KlastER.

Barriers 1 and 9: Access to finance/lack of adequate support for early-stage communities/lack of investment support (B1) and large initial investment requirements (B9)

- Energy community projects typically require significant resources at the preparatory stage (feasibility studies, cost-effectiveness, installation of RES, contracts, all prior to the registration of the cluster in the URE registry or the cooperative in the registry by KOWR - the National Support Centre for Agriculture). Access to funding is difficult at this stage, as not all available support tools include energy communities at concept level in the list of beneficiaries. Funding was available for pre-investment activities for energy communities under the National Recovery and Reconstruction Plan (measure B2.2.2/G1.1.2 call closed), which included this type of beneficiary. However, during the interviews, stakeholders pointed out that B2.2.2/G1.1.2 support did not meet the needs of energy communities because it was not efficiently implemented - many communities are looking for answers to the same questions, so dedicated advice for each beneficiary may result in duplication of efforts by the administrative staff, inefficiencies and added administrative burden.
- The lack of adequate investment support was also repeatedly highlighted in the interviews[35]. Several sources of funding are needed to implement EC projects, including commercial loans. However, this funding can be particularly difficult to obtain as energy communities often do not have a proven track record or experience in energy project numbers, i.e. they cannot demonstrate that they have the necessary technical, managerial and legal knowledge to effectively implement and operate these projects. Lack of experience can pose a risk of misuse of funds and project failure.
- If ECs cannot secure the needed funding, projects may be halted or modified, or the community may not be able to start operations at all and exist only 'on paper'. Such was the case of one cluster from Małopolska, which could not be developed further due to lack of financial support (Heart of Podhale Energy Cluster)
- Long processing times by the administrative staff for applications for support were also highlighted. Delays of up to over a year, like in the case of investment support for ECs from the NRRP, limit the effectiveness of the programmes. For example, one energy cooperative applying for investment support from NRRP stated that, due to delays, |even if investment support is granted, they will not be able to spend it until June 2026, so we are unlikely to accept it|. This energy community ultimately did not receive investment support from the NRRP nor from the 'Energy for Villages' programme financed from the Modernisation Fund.

Barrier 2: Requirement for diverse competencies within an energy community (B2)

- Members of ECs need to have a variety of competencies for the projects to function effectively. This includes knowledge of law, taxation, installation, investment and contract management, as well as experience in creating business plans, reading and understanding the municipality's planning and strategic documents. Lack of these competences can lead to mistakes in filling out applications, misinterpretation of the law and problems with coordination between different stakeholders. Several clusters mentioned difficulties in understanding the complex legal system on energy regulation or difficulties by the

[35] Within the investment support from B2.2.2/G1.1.2 from the NRRP, 19 projects were awarded support (Results of investment support as of 18.06.2025), achieving the financial allocation for this programme (originally aiming to support 20 projects). This is a small number considering the huge interest in the number of 94 applications amounting to more than PLN 2.7 billion (Completion of investment call - Ministry of Climate and Environment - Gov.pl portal) and the demand for project demonstration, that is showing in practice, that the technological, organisational or financial solutions are possible and effective.

administrative staff in preparing an application for the URE registry due to incomplete data received from DSO.

- Participants of the Action Plan consultation workshop highlighted the link between this barrier and the lack of specialists in the region, but also, despite a few exceptions, inadequate and outdated offer of professional training and education programmes on the topic. The coordination of an EC requires interdisciplinary knowledge that is difficult to acquire in the educational courses offered at universities and vocational programs.
- These competencies can be outsourced to the coordinator, but this in turn leads to a lack of building these capabilities within the community itself. Building these skills internally is an excellent opportunity to create jobs and build self-sufficiency, as well as ensuring that the interests of all parties are well represented.

Barrier 3: Difficulties in working with distribution system operators (B3)

- One of the main barriers identified during the interviews is the incomplete regulations for cooperation between DSOs and energy communities. Specifically, for energy clusters, the amendment of the RES Act did not introduce clear rules for cooperation between the cluster coordinator and the DSOs. DSOs often do not have clear guidelines or experience in working with energy communities and are often not involved in planning for distributed energy development (such planning does not exist at regional or local levels, see Barrier B5), which, according to stakeholders, leads to difficulties or reluctance to integrate new installations into the grid. This reluctance on the part of grid operators in turn discourages potential founders of ECs and reinforces the dependence of existing actors on the conventional energy sector. Prolonged waiting times for grid connection and communication difficulties resulting from frequent changes in procedures and dispersed responsibility for individual actions on the part of DSOs were also noted in the report 'Energy for Małopolska[36]'.
- The process of entering into a distribution service agreement with the DSO is also an important aspect. This process can be complicated and time-consuming, especially for larger installations. The lack of cluster general distribution agreements between large energy operators and cluster coordinators is another obstacle that blocks local initiatives from developing. This aspect is also highlighted in the report 'Energy for Małopolska'[36], according to which local governments reported cases of unilaterally imposed contract terms, especially in situations when consumers chose an energy supplier other than the one associated with the distributor and did not sign so-called comprehensive agreements. In such cases (absence of a comprehensive agreement), there were, among other things, significant delays in connecting to the grid or in the installation of meters.

Barrier 4: Low public awareness and interest in RES / Local opposition to RES (B4)

- Low awareness of RES and ECs is a barrier to the development of energy communities. Residents and other stakeholders (except for the public administration stakeholders) have low awareness regarding distributed energy. There are many models of energy communities, which is confusing for residents. Lack of awareness about the benefits and opportunities of RES and the various energy community models limits interest and support for these initiatives. In addition, energy cooperatives have negative connotations in Poland with communist-era agricultural cooperatives and discourage residents from getting involved in RES initiatives.

[36] The report 'Energy for Małopolska' created by the Krakow Technology Park (KPT) team working on cooperation with local self-government units - the report is available to view on request after consultation with KPT.

- Local opposition to renewables, based on the so called Not In My Backyard (NIMBY) phenomena, is a significant challenge. Despite the growing interest in RES, residents often oppose installations in their immediate vicinity, especially in the case of wind energy and biogas sites.
- It is important to highlight that there are also important opportunities in the region. There is a growing interest in renewable energy sources in Poland, including photovoltaics, which can accelerate the development of energy communities. An example is the Renewable Energy Cluster Turystyczna Podkowa, where local interest in photovoltaic installations exceeded the number of participants that could be supported.

Barrier 5: Limited skills and knowledge on the part of public administration regarding distributed energy, including programming of support / or unclear responsibilities (B5)

- Lack of skills and competences on the side of public administration and unclear responsibilities are significant barriers to the development of energy communities in Poland. These barriers can be divided into three levels: local, regional and national.
    1) **At the local level,** one of the biggest barriers is limited local organisational capital. There is potential for the development of energy initiatives, but **limited capacity to start such initiatives, spatial planning for such initiatives, and advice to interested actors can be challenging**. Local authorities lack the resources and the needed competences on distributed energy. Local authorities (municipalities and counties) do not always have the expertise, manpower and resources needed to support and manage distributed energy development. local self-government units have the opportunity to play a key role in the development of energy communities but need support in acquiring knowledge and competences. Currently, there is a lack of training and educational programs that could help local government units better understand the processes of initiating and implementing ECs, including taking into account their potential in issuing building permits, etc. There is also a lack of training for environmental advisors, who could play an important role at the sub-regional level and could also play an important role if they were properly trained in the field of distributed energy. A barrier highlighted during the consultation of the Action Plan in Krakow was the untapped potential of municipal heat, electricity and gas fuel supply plans, which could form the basis for the development of distributed energy.

    2) **At the regional level**, the lack of **a distributed energy strategy and the lack of a clearly defined mandate for the Marshal's Office of the Małopolska Region with regards to distributed energy** leads to a dilution of responsibilities, information and resources. Various departments in Marshal's Office have a point of contact with distributed energy, but there is no clearly defined mandate. The lack of an energy agency at regional level is a barrier. Capacity building activities in this area have been undertaken by the Marshal's Office, but strategic planning and monitoring of the status of distributed energy development is lacking. At the regional level, additional capacity building is needed to ensure that support instruments are adapted to the needs and nature of ECs in light of changing legal rules. For example, to avoid cases such as described by one of the interviewees, regarding the delay of call for applications for financial support from action

8.11 Energy transformation[37] due to uncertainty regarding the inclusion of different types of energy communities in the list of beneficiaries.[38]

3) **At the national level,** the responsibility of regulating and offering support for distributed energy is divided between actors such as the Energy Regulatory Office (URE), the National Agricultural Support Centre (KOWR), the Ministry of Climate and Environment and the Ministry of Agriculture and Rural Development. The lack of clear regulations defining the tasks and competences of the public administration at regional, poviat and municipal level in the field of distributed energy leads to inefficiencies in the administrative processes and extended waiting times for permits, evaluation of applications, etc. The lack of a top-down, central plan related to distributed energy was mentioned as an obstacle by a representative of one of the clusters.

Barrier 6: Incomplete/changing regulations/not fully responsive to needs (B6)

- Functioning of ECs is regulated by a number of Laws in Poland (see the *Introduction*). These laws have been subject to amendments over the last few years. Examples of changes are the new models for energy communities introduced in 2023 and 2024 (virtual prosumer and OSE) and the new rules of operation for energy clusters from 2024 onwards. The changing legislative landscape is a key barrier for energy communities, as it hinders strategic long-term planning and requires the ability to adapt and understand changing regulations.
- In addition, the new legislation for energy clusters is unclear and leave room for interpretation, especially regarding the cooperation of clusters with distribution system operators (see B2). This creates ambiguity in the interpretation of the law and particular uncertainty for energy clusters, who must plan their development strategy in light of incomplete and evolving legal regulations governing the rules of their operation, which leads to a heavy administrative burden due to various competencies and financial investment needed (see B7).
- Existing regulations do not fully address the needs of energy communities. They also raise interpretative questions, including regarding the personal and material scope of energy clusters and with regard to energy cooperatives as to the need for an electricity trading licence. Given that energy clusters have no legal personality, subsidies are granted to individual entities. This makes it difficult for local self-government units to spend public funds.
- Additionally, some elements from the draft amendment to the Renewable Energy Sources Act, resulting from the need to implement the updated provisions of the EU's RED III Directive, requires notification to the European Commission (in particular the provisions concerning preferential settlement for energy clusters), which leads to market uncertainty for energy clusters. Delays in the process of transposing the amended provisions of the RED III Directive into national law leads to further complications.

Barrier 7: Administrative challenges (B7)

- Energy communities have to deal with a variety of administrative challenges such as:

[37] Measure 8.11 Energy transformation, project type A and project type B | Programme website European Funds for Małopolska 2021-2027 , call opened 29.05.2025.

[38] Also included as a barrier here: Common position of organisations developing distributed energy, accessed on 02.09.2025

- Project management: The need to have project management skills, including planning, monitoring and reporting progress, including to the Regulatory Office (energy clusters).
- Financial management: Ability to manage budgets, fundraising and accounting for grants and loans.
- Human resource management: Team coordination, recruitment and training of staff and volunteers.
- Risk management: Identification and management of risks associated with the implementation of energy projects.
- Knowledge of aspects arising from cooperative law in the case of cooperatives, e.g. the requirement of a vetting, according to Article 91 of the Cooperative Law, which is a mandatory inspection carried out at least once every three years.

This illustrates the need for the differentiated competencies described in barrier B2. Combined with the lack of knowledge and skills on the part of public administration and energy community participants, as well as the difficulty in finding an adequate coordinator (B13), this poses a challenge for the development of these projects.

- In addition, administrative challenges result in financial costs for communities, as dedicated staff or external advisors are needed to meet administrative demands. On the other hand, the lack of administrative competence is often the result of underfunding and understaffing due to insufficient budgets allocated to public administration.

Barrier 8: Lack of knowledge and education on RES and distributed energy and good/bad practices (B8)

- The lack of widely available information about effectively operating ECs is, according to actors from the region, a significant barrier to the development of energy communities, especially energy cooperatives. Energy clusters are more common and are perceived as more successful than energy cooperatives, the number of examples of clusters operating according to the new rules is also growing (example Gliwice Energy Cluster). Access to information on 'best practice' from other clusters or energy cooperatives would be helpful in disseminating useful knowledge for new energy community projects. In particular, energy cooperatives, which include actors other than municipalities, lack successful examples showing how to develop such projects in cooperation with residents and entrepreneurs. Useful examples would also include 'bad' practices, i.e. tried but failed solutions, or information about procedural barriers encountered.
- Internet sources are rich in examples and best practices, but they are scattered and often outdated due to changing legislation. This makes it necessary for energy communities to keep their knowledge up to date and adapt to new regulations. There is a lack of information on 'bad' practices or failed/resolved initiatives.
- The lack of a central database of data and good practices, including templates for documents used in energy communities such as statutes, cooperation agreements and balancing regulations, further hinders the development of new initiatives. There is also a need to acquire best practices regarding administrative processes (see point 7) and cooperation with DSOs (see point 2). Local initiatives often see these best examples as difficult to find.

From the above points, we can see that the identified barriers are interlinked. This makes addressing these barriers, complex, but at the same time means that solutions addressing a particular barrier will have an impact on the other barriers. In the following section, actions to address the identified barriers are described.

6. Proposed actions

Based on the identified barriers (Chapter 5), a series of recommendations have been developed, focusing on four key areas:

A. Legislative and regulatory
B. Programming of financial support
C. Competence building and cooperation
D. Education and information

Although many of the identified barriers are horizontal in nature and relate to the situation in Poland (legal frameworks, available funding), the main aim of the recommended actions is to respond to local needs and support the development of energy communities in (Western) Małopolska. The list of recommendations was created on the basis of expert literature and extended with selected recommendations included in the Strategy for the Development of Distributed Energy in Poland until 2040 developed by KlastER for the Ministry of Climate and Environment. The recommendations included below do not focus on the technical needs of modernising the energy system or on technological aspects of RES installations or monitoring - this area is comprehensively described, for example, in the above-mentioned strategy.

In each section, the recommendations are ordered according to their importance (from highest to lowest) to the surveyed energy communities and local stakeholders and to the participants of the consultation workshop which took place in Krakow on 8 July 2025.

A. Recommendations on legislative-regulatory aspects

A key objective of this area is to address the legal and regulatory barriers to the development of energy communities. This area deals with issues such as clarifying regulations on the detailed rules for the operation of energy communities, taking into account the needs and potential of these communities, or improving the rules for cooperation between DSOs and different types of energy communities. Action D1 concerning the clarification of regulations on the given issues was considered the most important during the consultation workshop. It was also stressed during the workshop that the development and implementation of legislation affecting ECs should be consulted with a team of experts from the sector and representatives of ECs - practitioners directly involved in the functioning of energy communities. The main addressee of these recommendations is the national public administration, which should take steps to make the regulations more precise and specific to better respond to the needs and realities of ECs. The Energy Regulatory Office (URE) has been assigned a supportive and consultative function in selected activities.

In the table below, the main addressees of the actions are marked in dark blue and actors with a supporting role in light blue.

Table 4: Recommended legislative and regulatory actions

	Recommended action	Barrier	Requires action by the entity: Central government administration	
D1	**Clarification of legal regulations**: - detailed rules for the operation of new ECs models (OSE, and virtual power plant with aggregator), and clarification of the rules for the operation of energy clusters; - principles of cooperation between DSOs and each type of energy community, e.g. specifying the types of installations which cannot be connected to the grid, and the requirement to publish updated data on available capacities not only in the context of the primary power connection points, but also adequate to the administrative division of the country, e.g. communes, districts and provinces; - adapting the regulations to the actual conditions of ECs, including a clear description of the procedures for modifying the cluster development strategy and the steps to be taken in the event of the formal dissolution of ECs projects (for example, who is responsible for their liquidation)[39]. It is important to construct regulations in such a way that they imply concrete, practical and clear guidelines, e.g. by clarifying provisions of the RES Act, net-billing and accounting for surplus energy. - standardisation of operational and administrative information types—such as data on energy production, consumption, and settlements—as well as the processes for exchanging this data within energy clusters and with external stakeholders (e.g. grid operators) is needed. Furthermore, the law (Renewable Energy Sources Act) should be consolidated with other legal acts (including the Energy Law) to eliminate conflicting information and implementation barriers.[40]	B3, B6, B12, B18	Ministry of Climate and Environment (MCE)	Cooperation with URE
D2	**Defining a team of experts at the level of the Ministry** (for example within the RES Department of MCE) **to monitor implementation of the new legislation on ECs and collect postulates on the requested changes to legislation by ECs.** One of the tasks of such a team could also be the identification of legal gaps and updating of assumptions and objectives on ECs development in Poland as well as ensuring consolidation of the Energy Law with other legislation relevant to ECs. Such a team should regularly consult professionals from research institutions and energy companies who possess both practical experience and expertise in renewable energy technologies and energy system integration to verify the effectiveness of legal changes.	B3, B6, B12, B18	MCE	Cooperation with URE

[39] Additionally, participants pointed out difficulties in integrating existing installations into new energy community projects (and in connecting them with new installations).

[40] Workshop participants gave the example of an energy cluster in Małopolska which, as the owner of a local distribution system operator —a permitted activity for energy clusters—is not allowed to simultaneously own energy storage facilities and vehicle charging stations, even though these are also permitted types of activity.

	Recommended action	Barrier	Requires action by the entity:	
			Central government administration	
D3	**Enabling energy communities to provide flexibility services**[41] , i.e. adapting energy consumption to the needs of the grid, and **allowing cable pooling, i.e**. **the use of a single connection for a given installation, for energy storage** facilities which are not part of a RES installation (even if owned by an entity other than the RES installation operator).[42]	B3	MCE	Cooperation with URE
D4	**Make it easier for energy clusters to sign contracts and access funding, for example by granting them a legal personality**. Amendments to regulations and/or competitions and calls should take into account the special structure of energy clusters so that legal personality is not required in order to obtain funding.	B1, B12	MCE	
D5	**Simplification of procedures at the stage of establishment and use of DSO networks** (distribution system operators not directly connected to the transmission grid): easing the conditions for obtaining a distribution licence and the mandatory information related to the licensed activity; making the conditions dependent on the size of the area of operation of the DSO; lifting restrictions on the connection of energy storage facilities and electric car charging stations for small DSOs.[43]	B3, B20	MCE	Cooperation with Energy Regulatory Office
D6	**Remove the capacity limit for energy cooperatives** to reduce the need for TSOs to re-establish the initiative when more potential emerges.[44]	B6	MCE	

B. Recommendations in the area of financial support programming

A key objective of the activities of this area is to address the financial barriers experienced by energy communities. This area focuses on aspects relevant to the programming of support instruments, both at central and provincial level. Actions D7-D9 were flagged by local stakeholders and experts as the most significant and relate to updating financial support mechanisms, extending them to new types of energy communities, as well as streamlining their disbursement and facilitating access to these programmes. Participants in the Action Plan consultation called for an increase in funding from the National Recovery and Resilience Plan for the development of energy communities, while emphasising the value of activities implemented as close to the beneficiary

[41] Recommendation also highlighted in Strategy for the development of distributed energy in Poland until 2040, accessed on 02.09.2025, developed by the KlastER project for the Ministry of the Economy and Labour.

[42] More information at this link: Cable pooling - first six months of new regulations - KPMG Poland, accessed on 02.09.2025.

[43] Recommendation also highlighted in Strategy for the development of distributed energy in Poland until 2040 developed by the KlastER project for the Ministry of Climate and Environment, accessed on 02.09.2025.

[44] Also included in the recommendations published after the 2nd Distributed Energy Congress: Recommendations of organisations developing distributed energy , see p.2b, dated 29.11.2024, accessed on 02.09.2025.

as possible - i.e. through the regional level. During the consultation workshops, the need for not financial support beyond RES projects, which would also include funding for competence and information exchange was highlighted. An idea proposed was to establish funds to which financing from programs like the Labour Fund and the National Training Fund, among others, could be channelled[45].

In the table below, the main addressees of the measures are marked in dark blue, and the actors assigned a supporting role in light blue.

Table5 : Recommended actions in the area of financial support programming

	Recommended action	Barrier	Requires action by the actor:	
			Administration central government	UMWM
D7	**Support should be tailored and cover both the preparation stage[46], as well as the implementation of projects**[47] . Recommended: - continuation of support (e.g., like the one programmed in the NRRP) in the form of grants for initiatives at an early stage of development (model development, pre-investment analyses, financing of preparatory steps for the establishment of an energy community and under investment); - continuation of support (e.g., like the one programmed in the NRRP or programme *‚Energia dla wsi'*) for innovative, complex projects such as local energy communities, biogas plants and energy storage, and (auto)balancing projects; - launching dedicated support instruments for new forms of communities, such as the Citizen Energy Community (PL*: Obywatelska Społeczność Energetyczna, OSE*); - launching separate programmes for energy cooperatives and energy clusters, given their different organisational nature and needs; - support for energy clusters should promote the active involvement of businesses with high energy consumption or high emissions aiming for decarbonization as key players in the energy transition;	**B1,** B3, **B8**, **B9**, B18, B19, B22	MCE, Ministry of Family, Labour and Social Policy, National Fund for Environmental Protection and Water Management	UMWM

[45] A detailed analysis of how these funds should be adapted goes beyond the scope of this action plan. This is one of the potential topics to be examined by the relevant Ministries, including the Ministry of Climate and Environment, to determine how the objectives of the respective funds and strategies can be coordinated.

[46] It is recommended to support energy community initiatives of a 'request for proposal' type, similar to the mechanism used in the LIFE programme, i.e. dedicated resources and support for the preparation of the project concept and then the main application to access (financial) support.

[47] Under the B2.2.2 programme from the NIP, investment support has been awarded to 19 projects (Investment Support Results as of 18.06.2025). This is a small number considering the huge interest in the number of 94 applications amounting to more than PLN 2.7 billion (Completion of investment call - Ministry of Climate and Environment - Gov.pl portal, accessed on 02.09.2025) and the demand for project demonstration, i.e. showing in practice that specific technological, organisational, or financial solutions are feasible to implement and effective.

	Recommended action	Barrier	Requires action by the actor:	
			Administration central government	UMWM
	- launching programmes with long-term support for initiatives - from incubation through implementation to development and optimisation - including energy and legal advice, pre-investment analysis, start-up grants, support in energy balancing and monitoring (see also recommendation D19); - continuation of support (at national level and beyond) supporting competence development and information exchange (including study visits) at ach local and regional level[48]; - inclusion of a broad catalogue of beneficiaries in the calls for support schemes, including Local Self-Government Units, SMEs, and clarification of the status of farmers as beneficiaries/entrepreneurs due to lack of clear distinction between personal and commercial activity[49]; - Dedicated support for RES projects that increasing the resilience of municipalities in situations of crisis e.g. war or natural disasters caused by climate change.			
D8	**Accelerate decisions on granting financial support and simplify documents for calls for proposals** - current delays, reaching even more than a year (example: investment support from NRRP), limit the implementation of programmes. There is a need to introduce a maximum time for assessing applications to provide more predictability for investors. Participants in the consultation highlighted the issue of language accessibility of calls for proposals - the documentation should be understandable to potential participants in the energy community, not just experienced experts. Participants also pointed to the excessive requirement for advanced information on technical aspects of the planned investment, available only to projects that have already undergone a detailed pre-investment analysis.	B1, B2**, B5**, B7, B9	MCE, National Fund for Environmental Protection and Water Management	UMWM
D9	**Provide an up-to-date, complete and understandable overview of available financial instruments and other support for energy communities**.[50] It is recommended to create an officiall source of knowledge - e.g. on the government's information pages by creating an information page on the website of one of the responsible ministries and including links that redirect users to the relevant fund websites - and to implement a dedicated filter „support for energy communities" on the website of the Marshal's Office of	**B1**, B5, **B7**	MCE	UMWM

[48] See also Recommendation D17. The Voivodeship Labour Office is implementing actions under Priority 8.1 – *Comprehensive programmes for transformation and labour market support*, which includes a second call for projects in Q2 2026. These projects foresee support measures such as skills development and grants for starting a business – with the possibility of targeting these forms of support toward activities related to RES.

[49] While some farmers meet the criteria of entrepreneurs—engaging in continuous, profit-oriented activities and participating in the market—others operate at subsistence or semi-commercial levels. This creates uncertainty in determining eligibility for funding under programmes like KPO.

[50] Such a review could be part of a government information portal for energy communities. See D24.

	Recommended action	Barrier	Requires action by the actor:	
			Administration central government	UMWM
	the Małopolska Region to enable a quick search for available forms of support, conditions of participation and how to apply.			
D10	**Strengthen the system of investment incentives promoting the integration of RES installations with energy storage**, which will increase the flexibility and resilience of the electricity system. In addition, it is worth supporting **solutions enabling balancing of energy consumption and production** and the implementation of advanced energy monitoring and management tools, for example through additional points for such solutions during project assessment.[51] Consultation participants suggested that the system of discounts (fee waivers) for clusters should be 'dynamic', depending on the level of cluster self-consumption.	B1, B3, B8, **B9**, B14, B18, **B19**	MCE	UMWM
D11	**Reliable consultation of support programmes with key stakeholders involved in the development of distributed energy** - investors, operators, local governments and communities. This solution prevents the implementation of programmes that do not correspond to real needs and do not bring the desired results.[52]	**B1**, **B5**, B9, B12, B18, B19, **B20**, B22	MCE	UMWM
D12	**Requiring registration with** the Energy Regulatory Office (URE)(energy clusters) or the National Support Centre for Agriculture (energy cooperatives) **until the project is completed, rather than as a condition for support**[53] . This approach avoids administrative barriers at an early stage of project development, while supporting the implementation of new energy cluster operating rules focusing on transparency, promoting self-sustainable initiatives, and reporting to the URE - important especially for larger and complex initiatives.	**B1,** B5, B9	MCE, National Fund for Environmental Protection and Water Management	UMWM
D13	**Launch dedicated programmes supporting cooperation of distribution system operators with distributed energy entities,** including through bonus mechanisms for increasing autoconsumption, connection capacities from RES (including biomass) and energy storage.[54]	B1, B3, B14, **B20**	MCE, Ministry of State Assets (MSA)	

[51] Ibid.
[52] Ibid.
[53] See also D7. A restrictive support condition covering only registered initiatives is, among others, programmed in measure 8.11 supporting RES in Małopolska, and it prevents many projects from receiving support. None of the initiatives in Western Małopolska are registered with the URE. Another example (from outside the region) is the Czorsztyn Reservoir Energy Cluster, which cannot be registered in the register of URE, nor in the register of National Support Centre for Agriculture, because the initiative involves cooperation with two DSOs- this project, however, received investment support from KPO, which did not apply the restrictive condition on registration with URE or National Support Centre for Agriculture.
[54] Ibid.

	Recommended action	Barrier	Requires action by the actor:	
			Administration central government	UMWM
D14	**Publication/sharing of good practices by regional units managing EU funds** (for the development of distributed energy). These should include guidance on: • who can receive support (catalogue of beneficiaries), • how to evaluate the effectiveness of projects, • how to apply state aid rules, • how to transfer funds, benefits and assets within energy communities.	**B5,** B12	MCE	

C. Recommendations in area of capacity building and cooperation

A key objective of the activities in this area is to address competence barriers at different levels of administration, coordination and administrative challenges experienced by energy communities as well as insufficient exchange of good practices and networking of initiatives. The main addressee of this area is the local administration, while local government organisations and science and R&D centres are assigned a supporting role. The most important recommendation in this area is the creation of a regional unit with the working name of the Małopolska Centre for Local Energy Development, which, due to its relevance and urgency for the Marshal's Office of the Małopolska Region, is described in detail below. The participants of the consultation workshop also considered the creation of such a unit in the region as a priority action. In addition, they underlined the strategic importance of activities to strengthen advisory capacities in the counties on energy issues, as well as on educational and training offers to improve competences. The Małopolska Centre for Local Energy Development (described below) could play a major role in implementing these activities and this is indicated in the summary table of this area.

RECOMMENDATION D1 5: MAŁOPOLSKA CENTRE FOR LOCAL ENERGY DEVELOPMENT

Based on the analysis of the current situation and in order to effectively respond to the barriers faced by energy communities in Małopolska (especially Western Małopolska), it is recommended to create a dedicated unit for local energy, including energy communities, at the regional level. Such a dedicated unit could act as a **regional competence centre for local energy** , addressing the main needs by:

1) Coordinating and monitoring topics related to this field between the Marshal's Office, Local Units of Government, energy companies and other stakeholders in the Małopolska area, consulting and providing input to strategic documents and fund planning, collecting results of current projects and supporting the development of competences in different departments of the Marshal's Office.
2) Advisory support for municipalities/counties planning to invest in RES, with untapped potential or interested stakeholders in their area, for example by providing materials and tools for county advisors and coordinating their activities.

3) Active support for energy communities through information and awareness-raising activities, a collection of available materials and tools developed for these initiatives, and providing a space for cooperation (for example through quarterly online meetings for energy communities to exchange best practices).

The unit could also carry out other tasks, including, for example, those of a monitoring and decision-making, analytical, lobbying and networking.

The creation of a dedicated monitoring and decision-making unit was also highlighted in the recommendations based on the audit on energy in Małopolska conducted by the Kraków Technology Park. The KPT's recommendation proposes the creation of a working group with the participation of the provincial governor, representatives of the Małopolska voivodeship and institutions dealing with economic development, which would deal with the broad topic of infrastructure needed to attract investments (according to the respondents of the audit, similar problems as with energy issues also concern land transformation or communications). [55]

Proposed tasks of the Małopolska Centre for Local Energy Development:

- Contribution to the strategic and operational planning of the province, elaboration of goals for the development of energy communities and consideration of their needs.
- Competence building of the Marshal's Office and units active in this field, support of the development of instruments and support mechanisms, sharing information resulting from projects between local self-government units and initiators of energy communities.
- Initiate the coordination of activities supporting the development of energy communities in the region: promote initiatives in areas with high-RES potential and priority from the point of view of the province and beyond municipal boundaries, through cooperation with local authorities and stakeholders (facilitating cooperation between local authorities, businesses, churches, hospitals and housing and social associations).
- Maintaining an up-to-date database of energy communities as well as stakeholders who can play a role in energy development local.
- Promoting partnerships: supporting partnerships between local authorities and business to develop energy communities.
- Permanent contact with partners from science and R&D (new technologies, initiatives) and the Ministry of Climate and Environment (new support instruments).

[55] Report "Energy for Małopolska" created by the team for cooperation with local self-government units of the Krakow Technology Park, the report is available on request after consultation with KPT.

- Monitor the status of local RES energy development: regularly follow the progress of energy projects by contacting initiatives, providing information to regional strategies and identifying areas in need of support.
- Organisation of a platform for the exchange of good and "bad" practices: organise monthly online meetings for energy communities to share experiences and practices, promote successful projects and build support networks. Up-to-date data on the status of projects could be collected through monitoring activities and published on the Centre's website.
- Technical and educational support: collection of available materials and tools, promotion of available training for local self-government units on distributed energy. Based on Strategy for the development of distributed energy in Poland until 2040 developed by KlastER for the Ministry of the Environment, it is important to create a communication and promotion strategy, taking into account the level of knowledge of the society, the specificity of the audience groups and the relevant communication channels. Communication about distributed energy should be linked to innovation and regional development activities, including European funds. According to the participants of the consultation, a set of good practices as well as the interpretation of amendments to legislation for ECs should be included in a nationwide educational and information platform (see D9 and D24).

The establishment of the Małopolska Centre for Local Energy Development may play an important role in overcoming certain barriers and accelerating the development of energy projects in the region. However, it should be emphasised that the Centre's activities will not resolve legislative barriers, which—identified as key in the report—can only be addressed through action at the central level.

Equipping this entity with appropriate resources and competences will allow for effective support of stakeholders and implementation of ambitious goals related to energy local in the region and would be a pioneering solution compared to other provinces. Although the Małopolska Centre for Local Energy Development should be located in the region in order to be closest to the beneficiaries of their activities, a significant support at the national level with a dedicated regulatory and financial support for the establishment and operation of this unit would be helpful (See D16).

The competence building and cooperation activities are summarised below according to their relevance for local stakeholders. In the table, the main addressees of the activities are marked in dark blue, and the actors assigned a supporting role in light blue.

Table 6: Recommended competence building and cooperation activities

	Recommended action	Barrier	Requires action by the entity:		
			Central government administration	Local government administration	Cooperating entities
D15	**Establishment of the Małopolska Centre for Local Energy Development** (regional level) as a specialised regional institution responsible for the coordination of activities for the development of distributed energy. This centre would perform the function of integrating knowledge and activities between the Marshal's Office, local self-government units and would support strategic planning, development of support instruments, monitoring of energy development, and conducting educational activities.	B1, B4, **B5**, **B8**		UMWM/ Centre for Local Energy Development	
D16	**Launching a system at national level to provide regulatory and financial support to regional units working on local energy development, including energy communities.** An example of such a unit is described in section D15. The financial support should cover the phases of establishment, development and operation of the unit. Participants in the consultation workshop unanimously indicated that such initiative can only be successful in the long term if it is not funded by a project of a specific duration.	B1, B4, **B5**, **B8**	MCE		
D17	**Include distributed energy topics in educational offerings, including a catalogue of training courses for human resources**. A flexible education programme based on an analysis of labour market needs should be developed and implemented, covering different levels of education from tertiary schools to workshops, vocational training and degree courses. The demand for funding of competence-building and re-training activities is included in Action D7. It is important that the regional educational and training offer reflects the priorities of the province. A theme stressed during the consultation was the need to formulate clear strategies at local and regional level that would include distributed energy topics as a priority. A key role could be played by the Industry Skills Centres, as well as existing initiatives of the Voivodeship Labour Office, such as *Małopolska Career Express*[56]. Distributed energy as a priority topic should be	**B2, B5, B11**	Ministry of National Education, MCE	Voivodeship Labour Office (WUP) as part of its statutory activities and own projects, in particular the Małopolska Think Tank for Workforce Development, the Małopolska Career Express, and the Voivodeship Labour Market Council	Industry organisations, educational institutions

[56] Recommendation also highlighted in Strategy for the Development of Distributed Energy in Poland until 2040, accessed on 02.09.2025, developed by the KlastER project for the Ministry of Climate and Environment, as well as in recommendations published after the 2nd Distributed Energy Congress: Recommendations of organisations developing distributed energy , see p.4, dated 29.11.2024, accessed on 02.09.2025.

	Recommended action	Barrier	Requires action by the entity:		
			Central government administration	Local government administration	Cooperating entities
	taken into account by the **Małopolska Lifelong Learning Partnership** and **Provincial Labour Market Council.**				
D18	**Strengthening the competence of advisors providing support** for ECs in municipalities and districts. Institutions on a sub-regional level e.g. district could act as local contact points for residents and entrepreneurs. There is a need to develop their knowledge on the integration of distributed energy into spatial planning and cooperation with DSOs and other stakeholders. Existing advisory structures (e.g. sub-regional climate and environmental advisors) can be used, after complementing their competences with distributed energy topics. It is crucial to equip the territorial self-government units with the necessary data - in particular the provision of RES potential analyses. Provision of data to territorial self-government units and coordination of advisory activities could be activities entrusted to the Centre for Local Energy Development.	**B2**, B3**, B5**, **B8**, B17, B21		Centre for Local Energy Development, institutions at sub-regional level	Krakow Technology Park (KPT), TAURON Polish Energy S.A. and Tauron Distribution could act as mentors, experts
D19	**Sustainable competence support for local energy communities and local self-government units** from an early stage of development. It is recommended to launch a programme of the type **"energy communities' incubator** ", offering comprehensive support for initiatives, from training, through analyses of profitability, feasibility, billing and investment planning, to advice on billing and scaling of initiatives[57]. The call for programming of long-term support is included also in Action D6. The implementation of the incubator could be one of the key activities entrusted to the Centre for Local Energy Development.	**B2**, B3, **B7**, B8, B11, B13, B21	MCE	Centre for Local Energy Development	Association of Polish Cities, R&D Centres[58], TAURON Polish Energy S.A. and Tauron Distribution could act as mentors, experts
D20	**Building networks for cooperation and knowledge exchange and demonstration of projects**, i.e. showing in practice that specific technological, organisational, or financial solutions are feasible to implement and effective**.** Cooperation between the	**B2, B3, B7, B8,** B13**,** B21		Centre for Local Energy Development	Energy communities, Association of Polish Cities

[57] Ibid.
[58] Including AGH within the Distributed Energy Competence Network.

	Recommended action	Barrier	Requires action by the entity:		
			Central government administration	Local government administration	Cooperating entities
	administration, business, science, NGOs and citizens should be supported and stimulated, e.g. through regular online meetings (e.g. "Café of Małopolska Energy Communities or "Community of Practice ") to exchange experience, flow of information and good practices. Respondents to the consultation survey indicated the need to create partnerships involving Business Environment Institutions (in the form of local government, business associations, entrepreneurs). This could be one of the key activities entrusted to the Centre for Local Energy Development. An important aspect highlighted by the participants is to enable online participation in consultation and promotion meetings of energy communities due to the significant territorial scope of the province and the limited time resources of the initiatives. Stakeholder networking will also take place under Measure 8.5 implemented by the Marshal's Office, however it is not exclusively dedicated to energy communities but to the energy transition process in general[59].				(PL: Związek Miast Polskich), R&D centres, including KPT as a knowledge intermediary
D21	**Activation of local energy leaders.** The Marshal's Office and local self-government units should identify and support potential leaders (e.g. entrepreneurs, activists, experts in the sector of retirement age) through field visits, trainings, potential analyses and direct contact with inhabitants and companies, aiming at community integration, consultation and project development. This action should include the inclusion/involvement of structures such as Local Action Groups (PL: *Lokalne Grupy Działania, LGDs*) and Integrated Territorial Investments (PL*: Zintegrowane Inwestycje Terytorialne, ZIT*) in the creation of energy communities, as they have social capital ready to be used in the implementation of projects. Participants in the consultation highlighted that it is the project leaders who are interested in the topic and with a willingness to learn, a sense of mission, leadership skills and institutional support that are the main success factor of energy communities in the region. Engaging in dialogue with all key stakeholders could be one of the key activities entrusted to the Centre for	B4, B22		Local Self-Government Units, UMWM, Centre for Local Energy Development	Energy Communities, KPT through Investor Assistance Department

[59] Action 8.5 Supporting the Just Transition Process, Type A. Monitoring of the fair transformation process, B. Networking and networking of stakeholders of the transformation process | Programme service European Funds for Małopolska 2021-2027, accessed on 02.09.2025

	Recommended action	Barrier	Requires action by the entity:		
			Central government administration	Local government administration	Cooperating entities
	Local Energy Development. Stakeholder networking will also take place under Measure 8.5 implemented by the Marshal's Office, however it is not exclusively dedicated to energy communities but to the transformation process in general[60].				
D22	**Active involvement of DSOs in the development of energy communities** - not only through infrastructure financing, but also through joint planning of network development and investment locations. The demand was formulated during the strategic workshop on the update of the provincial development strategy in May 2025, emphasising the potential role of the Marshal's Office as a coordinator and facilitator in this cooperation. The value of the DSO as an expert and key actor to develop larger, complex projects was highlighted during the consultation workshop. Additionally, as a large enterprise, the DSO also undertakes activities within the framework of its ESG and CSR strategies, and in this area could become involved in actions supporting ECs as local social initiatives of economic and environmental significance. Conducting a dialogue with all key stakeholders could be one of the key activities entrusted to the Centre for Local Energy Development.	**B3**, B14, B20		UMWM, Centre for Local Energy Development	DSO - Tauron Dystrybucja S.A
D23	**Inclusion of distributed energy in planning documents** - participants in the written consultation of the Action Plan suggested including distributed energy issues in key regional planning documents such as the regional development strategy. This would be an important step towards establishing a unit specialised in this area.	B1, **B5**		UMWM	

D. Educational and informational recommendations

A key objective of the education and information activities is to improve the image of RES and energy communities in society, as well as to popularise energy community models and their benefits. The participants of the consultation workshop underlined the added value of creating an educational and information platform, both at national level, covering national information, and at provincial level, covering regional and local information. Particular attention was paid to the current wide dispersion of information and the need to promote verified and updated sources of knowledge on distributed energy. Participants also

[60] Ibid.

stressed the need to support local governments and their staff in acquiring reliable information through study visits, sharing of best practices and expert workshops and seminars. Attention was paid to developing the competences of residents and local authorities through both formal and informal education (see also D17 and D20).

The activities on education and information are summarised below in order of their importance to local stakeholders. In the table, the main addressees of the activities are marked in dark blue and the actors who are assigned a supporting role in light blue.

Table7 : Recommended education and information activities

	Recommended action	Barrier	Requires action by the actor:		
			Central administration	Local administration	Cooperating entities
D24	**Education and information platform for citizens, entrepreneurs and local governments.** Creation of internet platform providing reliable and up-to-date knowledge about distributed energy, technologies and investment opportunities. It would counteract disinformation and build a positive image of RES in the local energy sector. The platform could include instructions on how to set up and run energy communities, case studies and tools to calculate the profitability of investments, information on funding opportunities (described above under D9), as well as tips on setting up energy communities and information on RES Accelerated Development Areas. The consultation specifically pointed out the need to publish documents on the possibility for local self-government units to purchase energy from cooperatives, the possibility for local self-government units to participate in cooperatives together with individuals and entrepreneurs, and the principles of energy balancing. The platform should include a page with updated questions and answers with links to relevant information sources. In addition: • The participants of the consultation unanimously pointed out that such an information platform should be developed at national level and should not be financed by a project with a defined duration, as the published materials needs to be updated regularly. • It has been suggested that the platform at national level should include interpretations of legal changes concerning energy communities, useful materials such as model contracts and calculators.	**B4, B5, B8, B15**	MEC	Centre for Local Energy Development	

	Recommended action	Barrier	Requires action by the actor:		
			Central administration	Local administration	Cooperating entities
	• Local and regional experiences, including examples of good and bad practices (see also D24), should be published not only on the national information platform, but by the Centre for Local Energy Development or within measure 8.5 implemented by the Marshal's Office (which includes a website on the transition process)[61].				
D25	**Study visits and promotion of good practices**. Organisation of study visits to functioning energy communities and promotion of models such as Citizens' Energy Communities, virtual power plants and other. Promotion of good practices can be done through publications, e.g. including key activities linked to financial expertise (accounting and tax aspects) and the creation and publication of a regularly updated list of good and bad practices on energy community development. According to workshop participants, savings on energy expenses in the municipality, are a big inspiration as demonstrated, for example, by the energy cooperative in Skawina.	B4, B5, **B8**	MDFRP	UMWM, Centre for Local Energy Development	Association of Polish Cities (PL: Związek Miast Polskich) and WUP
D26	**Supporting municipalities to organise workshops and educational seminars** to address doubts and concerns related to the creation of energy communities. The educational seminars should promote behaviour conducive to the rational use of energy by educating on technologies that arouse opposition or social resistance (e.g. biogas plants). Workshops should be led by experts and people who have technical, legal and/or financial expertise and experience with already implementing similar projects in other localities. Experts from the Tauron Group as a key local partner could play an important role here. It is important to show reliable, up-to-date and useful information on how to conduct RES projects and the practical benefits in terms of energy savings and independence. Competence development for citizens and municipalities should be supported through both formal and informal education at different levels, including schools. Micro-credentials[62] should be used in the delivery of courses and training.	**B4, B5, B8, B15**		Local Self-Government Units, Centre for Local Energy Development	Energy society, NGOs, R&D centres[63]

[61] Działanie 8.5 Wsparcie procesu sprawiedliwej transformacji, typ A. Monitorowanie procesu sprawiedliwej transformacji, B. Sieciowanie i nawiązywanie współpracy interesariuszy procesu transformacji | Serwis programu Fundusze Europejskie dla Małopolski 2021-2027, accessed on 02.09.2025

[62] https://education.ec.europa.eu/pl/education-levels/higher-education/micro-credentials, accessed on 02.09.2025

[63] Including AGH within the Distributed Energy Competence Network.

	Recommended action	Barrier	Requires action by the actor:		
			Central administration	Local administration	Cooperating entities
D27	**Communication strategy and promotion of distributed energy.** Develop a communication strategy that considers the level of knowledge of the public, the characteristics of the target groups and effective communication channels. Communication on distributed energy should be linked to innovation, regional development and the use of European funds.[64] The strategy should also aim to attract key local decision-makers in the energy community and identify and support local leaders. The communication strategy for identified leaders should promote agility based on institutional backing and build a sense of mission, showing the main benefits of developing distributed energy initiatives. Key aspects are the exchange of experiences between stakeholders and the promotion of professions and career choices related to energy and new technologies related to green energy production, e.g. through career guidance or career choice events. Clear strategies and messages at national and regional level, offering concrete guidelines, will help to build trust and increase interest in the topic among energy communities.		MCE MDFRP	UMWM, Centre for Local Energy Development	
D28	**Promotion of various RES and distributed energy technologies.** Disseminate knowledge, e.g. through public campaigns, about the possibilities of using not only photovoltaic panels, but also biomass and energy storage within energy communities. Cooperation with regional television channels could play a key role.	**B4**, B8	MCE	Supporting role Local Self-Government Units, UMWM, Centre for Local Energy Development	Climate and environmental consultants, energy society, NGOs, R&D centres[65]

[64] Recommendation also highlighted in Strategy for the development of distributed energy in Poland until 2040, accessed on 02.09.2025, developed by the KlastER project for the Ministry of Climate and Environment.

[65] Including AGH within the Distributed Energy Competence Network.

7. Conclusions

The development of energy communities in Wester Małopolska is not only a response to the challenges of the energy transition, but also an opportunity to build local resilience, energy independence and social activism. This chapter summarises the key activities and identifies potential and resources for further implementation.

Potential and resources in Western Małopolska

Western Małopolska has a number of resources that already provide the foundation for local energy development:

- **Involvement of local experts and potential from mapped stakeholders** - the project has identified more than 100 key stakeholders, including representatives of local governments, businesses, NGOs, research institutions and community leaders, with resources, conditions or organisational capital that can be useful in the development of energy communities. The number of mapped distributed energy initiatives, active participants in the consultations and workshops organised as part of this project, as well as interested experts representing research institutions in the region demonstrate the activity and willingness of these people to cooperate, which is an important social and organisational resource.
- **Existing energy communities** - there are already 25 energy communities in the region, including 16 energy cooperatives and 9 energy clusters. 6 of these initiatives are operating directly in Western Małopolska. This shows that the local environment is interested in and already partly prepared for the implementation of distributed energy solutions.
- **Good practices and inspiring examples** - the project has collected examples of successful initiatives on a national and provincial scale, such as the Tarnów Green Ring Energy Cluster or the Energy Cooperative in Skawina. These examples show that local communities can successfully implement RES projects, balance energy and create sustainable cooperative structures, demonstrating community benefits (including a decrease in energy costs). In addition, there are more than 30 climate and environmental advisors in the region, and the LIFE EKOMAŁOPOLSKA project has developed a handbook and provided training on energy communities.
- **Interest and need for action** - The results of the consultations, interviews and workshops show that the topic of energy communities is of great interest to local public administration, businesses and residents. There is a willingness to implement innovative and complex solutions, provided adequate support is provided.

Actions to meet needs

Despite the existing potential, the development of energy communities faces several barriers. The most important of these are outlined below along with key actions addressing them.

Table 8 : Main barriers and actions addressing them

Barrier	Actions	Action level
B1: Lack of early-stage funding and high start-up costs	Continuation of preparatory grants, clear timelines for call evaluation, creation of an official	National, regional

	information platform on funding opportunities (D7, D8, D9).	
B2: Lack of competence in energy communities	Development of educational and training offerings, advisory support at sub-regional level, energy community incubators (D17, D18, D19).	Regional, local
B3: Difficulties in cooperation with DSOs	Clarify rules of cooperation, enable flexibility services (D1, D3, D13, D22).	National, regional
B4: Low public awareness and local opposition	Study visits, educational campaigns, communication strategy, promotion of good practices (D24, D25, D26, D27, D28).	Regional, local
B5: Limited competence of public administration and lack of defined mandate	**Creation of the Małopolska Centre for Local Energy Development**, integration of Energy Communities in regional strategies, competence support for local self-government units (D15, D16, D23).	Regional
B6: Incomplete and changing legal regulations	Consolidation of legislation, expert team to monitor implementation of EC projects in Poland and collect legislation improvement needs/postulates (D1, D2).	National

It is worth noting that many of these barriers are interlinked - e.g. lack of competence (B2) affects administrative difficulties (B7), and unclear legislation (B6) exacerbates problems in cooperation with DSOs (B3). Therefore, the measures presented in this document intersect and their implementation should be coordinated and comprehensive.

Conditions for success for the implementation of the measures

The above actions require the involvement of key decision makers at national and regional level:

- **Involvement of the Ministry of Climate and Environment** - in regulatory and financial terms, including support for regional competence units and updating of legislation.
- **Involvement of the Office of the Marshal of the Małopolska Region (the Marshal's Office)** - in terms of institutional embedding of the Centre for Local Energy Development, coordination of activities and integration of Energy Communities in strategic documents.

Summarising a number of proposed actions, several key conditions for effective and sustainable development of energy communities in Małopolska need to be met:

- **Adequate financing** - both at the preparatory and investment stages. Support should be accessible, predictable and adapted to the specifics of the energy communities. It is particularly important to finance advisory, educational and organisational activities that build local capacities.
- **Capacity building of public administration, community leaders and training of experts** - local energy development requires interdisciplinary knowledge of law, technology, finance and management. Educational programmes, professional training, mentoring and institutional support for local self-government units and local leaders are needed.

- **An active role for local communities and local governments, as well as cooperation and knowledge exchange** - in initiating projects, building partnerships and implementing good practices. Cross-sectoral cooperation (local governments, business, scientific institutions and technology parks) is crucial for success.
- **Use and expand existing advisory, organisational and educational structures to engage the community more broadly in distributed energy topics** - such as climate and environmental advisors, Industry Skills Centres, Voivodeship Labour Office initiatives and local action groups.
- **Maintain and develop a database of stakeholders and energy communities** - as a tool to support planning, consultation and implementation of actions.

With the right financial and institutional support, energy communities in Małopolska can play an important role in the energy transition of the province. This is only possible if a wide range of stakeholders beyond local self-government units can be involved in such projects. The development of energy communities in the region can become a model for other regions and the foundation of a long-term energy policy for the voivodeship. The creation of the Małopolska Centre for Local Energy Development can be, not only a response to the identified barriers, but also an investment in the region's ability to support the energy transition in a sustainable way, based on local potential and cross-sectoral cooperation.

8. Annex - case studies of energy communities

8.1 Lądek-Zdrój Energy Cooperative

Description

The Ladek-Zdrój Energy Cooperative was established in 2015. As part of the vision of Ladek-Zdrój as an energy self-sufficient municipality, with activities focused on the construction of a new 1 MW photovoltaic power plant and plans to expand to a 6.5 MW photovoltaic power plant in the future. The cooperative currently supplies 101 energy points belonging to the municipality or its affiliated companies.

Structure of the cooperative

Founding members

- Municipality of Lądek-Zdrój
- Lądek Municipal Services Ltd.

- Centre for Culture and Recreation in Lądek-Zdrój

Objectives of the initiative

- Generating energy from renewable energy sources for the benefit of its members,
- Increasing environmental protection, reducing smog and low emissions,
- Increase awareness of the local community about environmental protection.

Ownership model

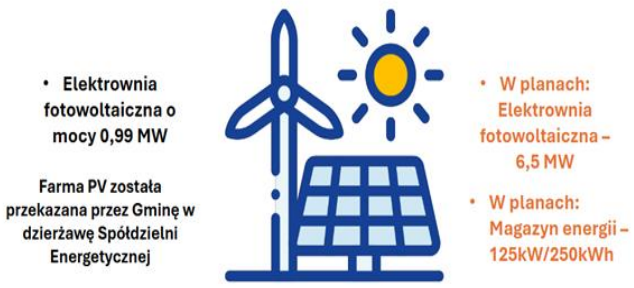
The cooperative is managed by a board of directors consisting of the Municipality of Lądek-Zdrój, Lądeckie Usługi Komunalne and the Culture and Recreation Centre. The members of the cooperative elect the board and make decisions together. The PV farm has been leased to the Energynat Co-operative by the municipality. Energynat plays a key role in the Ladek Energy Cooperative, supporting its activities at various stages of development.

Funding

Loan (no additional information available)

Technology implemented

Technologies adopted and planned



Planned benefits for the region and the community

	1. clean energy supply to the region 2. new and smart lighting installed and powered 3. minimised environmental damage and regeneration of degraded land
	1. Significantly cheaper than market energy for end users: Current cost of energy: £1.152/kWh net, co-operative energy cost: £0.314/kWh net
	1. energy for local organisations, e.g. schools and the local cultural centre 2. increased awareness of the local community about environmental protection

Project conclusions

- Energy balancing is a key element in the planning and organisation of the cooperative
- Financing renewable energy projects, requires the right choice of technology and finding public funding
- The right choice of founding members is important
- One of the main challenges faced by the energy cooperative was the acquisition of adequate generation capacity within the administrative boundaries of the municipality and the dispersed structure of the Energy Points of Consumption
- The original intention that the inhabitants of the municipality should be able to directly participate in the production and consumption of locally produced energy was not realised

8.2 Słupsk Bioenergy Cluster

Description

Słupsk Klaster Bioenergetyczny (SKB) is an energy cluster operating on the territory of the cities of Słupsk, Kobylnica, Ustka and the municipalities of Redzikowo and Ustka. The cluster is led and coordinated by the local municipal company Wodociągi Słupsk. The agreement, signed by 20 companies in 2017 and the city of Słupsk, brings together a network of local entities involved in the generation, consumption, storage and sale of electricity, heat and fuels. The cluster is a platform for cooperation, coordinating and initiating projects in the field of RES, CHP and civic energy development and the Low Emission Economy Plan. One of SKB's initiatives is the Słupsk Bioenergy Island.

The Slupsk Bioenergy Island initiative envisages linking together a group of distributed energy projects to create a common market for energy services and local energy consumption. The project includes new RES and CHP generation sources, associated infrastructure (including transmission lines, DSOn and energy storage) and the development of competences and resources for energy balancing.

Cluster structure

Members and councilcluster

Cluster Council:
- **Wodociągi Słupsk** (leader and coordinator), municipal water supply and sewage company (biogas)
- **ENGIE**, local heating company (CHP)
- **PARR**, administrator of the Słupsk Economic Zone (PV)
- **Baltic Wind**, owner of wind turbines (wind turbines)
- **City of Slupsk**, local government (aggregator)

Cluster members:
- **5 territorial self-governments and companies and general partnerships**

Objectives of the initiative

- Contribute to the climate neutrality of Slupsk, - Meet local energy demand by integrating social, environmental and economic objectives.

Ownership model

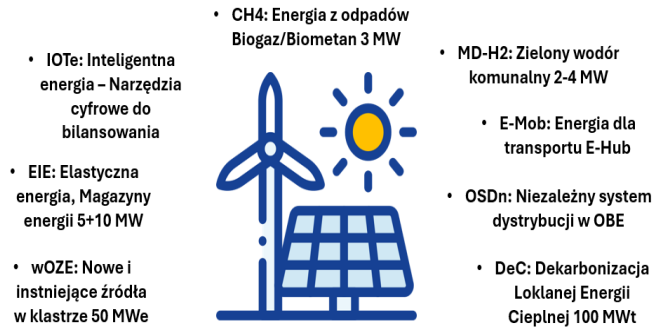
Energy cluster operating on the basis of a civil-legal agreement. The cluster is not yet entered in the register of the Energy Regulatory Office.

Financing

Słupski Klaster Bioenergetyczny implements projects financed from the Cohesion Fund, ERDF and national grants, including over PLN 37 million as part of the NIP 2021-2027.

Implemented technology

Technologies adopted and planned



Planned k benefits for the region and the community

	1. a significant share of "green" energy reduces the region's emissions. 2. Improved conditions for local development of renewable energy sources.
	Cheaper than market and more predictable electricity prices for end-consumers. - No RES or CHP charges in electricity costs, - Lower than standard distribution service charges. 2. possibility to participate in profits from peak demand reduction services.
	1. Improved reliability of energy supply and energy security. 2. Improving the local heating situation. 3. Creating sustainable economic and social links.

Project conclusions

Important:
- Transparent, voluntary and open cooperation model,
- Orientation towards common values and goals,
- Creating sustainable economic and social ties.

8.3 Oława Energy Cluster EKO

Description

Energetyczny Klaster Oławski EKO was established in 2017 and encompasses a variety of RES technologies and energy storage, combining the activities of the local government and companies such as Promet-Plast, which produces medical supplies with zero CO_2 emissions. The project is linked to larger projects such as the Agro Hydro Energy system. In the future, the cluster (led by Promet Plast) plans to develop a technology park consisting of a smart grid with gravitational energy storage. The cluster operates on the territory of the Oława city municipality and Oława rural municipality.

Cluster structure

Cluster members

- **TAURON Ekoenergia sp. Z o.o.**, cluster coordinator
- **PROMET-PLAST**, cluster leader, civil partnership based in Oława
- **METALERG sp. Z o.o**., sp.k. With registered office with its seat in Oława
- **Oława Municipality**
- **Oława poviat**
- Cooperation with research and scientific organisations

Objectives of the initiative

- Network supply, local energy storage
- Sale: cPPA* (enterprises from the Oława economic zone, investors from the Technology Park), sale on the Energy Commodity Exchange
- Energy sales planned, including concession for energy distribution
- The company wants to remain competitive in the production of medical materials by reducing energy costs

* cPPA, or Corporate Power Purchase Agreement, is an agreement for corporations to purchase renewable energy directly from producers.

Ownership model

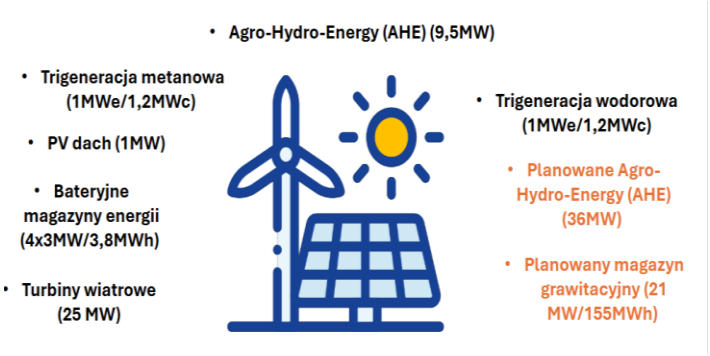
The cluster operates under a civil-legal agreement. Energy production activities are coordinated by Promet-Plast. The company sells energy to local entities, for example the municipality of Oława. There is no profit sharing. The cluster is not entered in the register of the Energy Regulatory Office.

Financing

Funding from various sources, including the Provincial Fund for Environmental Protection and Water Management and the National Fund for Environmental Protection and Water Management.

Implemented technology

Technologies adopted and planned



Planned benefits for the region and the community

	1. increase the share of renewable energy sources in the Polish energy mix, reduce greenhouse gas emissions and improve air quality 2. development of RES technologies cooperating with energy storage facilities 3. dissemination and promotion of good practices in the implementation of innovative environmental technologies
	1. creation of new jobs 2. increased competitiveness of companies using green energy 3. low cost of energy
	1. sustainable local development 2. explore the potential of using photovoltaics for agriculture using the example of the "Agro Hydro Energy" pilot plant in Gaj Oławski 3. increase energy security

Conclusions of the project

Main conclusions and good practices

- Challenges: energy balance especially on the side of local authorities and prosumers, energy strategy, balancing different needs (e.g. energy, business), access to finance.
- It is important to support research and development projects such as agro-hydro project or energy storage.
- Close cooperation and access to the resources of the large company Promet Plast, which has experience in renewable energy projects, is a significant support for the cluster.

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