



Deliverable 3.5

Four proposals for action plans to enhance the development of RECs in target regions

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ABOUT COME RES

COME RES - Community Energy for the uptake of renewables in the electricity sector. Connecting long-term visions with short-term actions aims at facilitating the market uptake of renewable energy sources (RES) in the electricity sector. Specifically, the project focuses on advancing renewable energy communities (RECs) as per the EU's recast Renewable Energy Directive (REDII). COME RES takes a multi- and transdisciplinary approach to support the development of RECs in nine European countries; Belgium, Germany, Italy, Latvia, the Netherlands, Norway, Poland, Portugal, and Spain.

COME RES covers diverse socio-technical systems including community PV, wind (onshore), storage and integrated community solutions, investigated in nine European countries. The project has a specific focus on a number of target regions in these countries, where community energy has the potential to be further developed and model regions where community energy is in a more advanced stage of development. COME RES analyses political, administrative, legal, socioeconomic, spatial and environmental characteristics, and the reasons for the slow deployment of RECs in selected target regions. COME RES synchronises project activities with the transposition and implementation of the Clean Energy Package and its provisions for RECs in policy labs. Policy lessons with validity across Europe will be drawn and recommendations proposed.

ABSTRACT

The aim of deliverable 3.5 is to elaborate proposals for action plans for 4 target regions in cooperation with a core group of country desk members. These action plans formulate proposals to enhance the development of renewable energy communities (RECs) in 4 selected target regions, taking into account the overall outcome and findings of the COME RES work packages such as the assessment of drivers and barriers, the dedicated stakeholder consultations, tailor-made business models for RECs, the in-depth assessment of transferable best practices, best practice transfer roadmaps for learning regions and the comparative assessment of enabling frameworks for RECs and support scheme designs. This report describes the methodological approach followed and presents the key findings for each of the target regions selected.

In section 2 the selection of the 4 target regions is explained. The 11 target regions in the different COME RES countries (i.e., Limburg, Noord-Brabant, Thuringia, Região Norte, Canary Islands, Balearic Islands, Latvia, Mazovia, Lesser Poland, Apulia Region, Norway) were scored for three criteria: (1) general support or interest for the development of RECs; (2) engagement of key actors in drafting proposals for action plans; (3) opportunity or momentum for drafting a proposal for action plan. The 4 target regions that were selected for drafting proposals for action plans: Canary Islands (Spain), Apulia Region (Italy), Região Norte (Portugal) and Lesser Poland (Poland).

The methodological framework for drafting the proposals for action plans is elaborated in section 3. The action plans were drafted in close collaboration with a core group of country desk members to support the development of renewable energy communities (RECs) in the selected target regions. The definition of the actions started from the barriers and drivers for the development of RECs in the selected target regions. The actions were clearly defined with specific roles, responsibilities and priorities.

Section 4 describes for each target region the process for drafting the proposal for action plan, the key actions for REC development in the target region and the next steps, after the lifetime of the COME RES project.

Section 5 consolidates the results of the 4 target regions and formulates the main lessons learned and conclusions.

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1. Aim and structure of the deliverable

The aim of deliverable 3.5 is to elaborate proposals for action plans for four target regions in cooperation with a core group of country desk members. These action plans formulate proposals to enhance the development of renewable energy communities (RECs) in the selected target regions, taking into account the overall outcome and findings of the COME RES work packages 2-7, such as:

- D2.3 Synthesis report of case studies on drivers and barriers in 5 selected target regions
- D3.4 Dedicated stakeholder consultations
- D4.2 Summary report of novel financing instruments for RECs
- D4.3 Report on tailor-made business models for RECs in 4 selected target regions
- D5.3 Synthesis Report based on in-depth assessment of ≥ 10 transferable best practices
- D6.3 4 best practice transfer roadmaps for learning regions
- D7.1 Comparative assessment of enabling frameworks for RECs and support scheme designs

The proposals for action plans aim to remove the barriers and reinforce the enablers for the future development of RECs in the selected target regions. The actions attribute specific responsibilities, roles and priorities and take into account the progress made in the implementation of the regulatory and enabling framework for RECs on the one hand and the lessons learned from the assessment of drivers and barriers, tailor-made business models, best practices and transfer roadmaps on the other hand. In each of the selected target regions, the proposals for action plans are presented and discussed with a wider group of key stakeholders in a policy lab.

This report describes the methodological approach followed and presents the key findings for each of the target regions selected. For this purpose, deliverable 3.5 is structured as follows. In section 2 the selection of the 4 target regions is explained. The methodological framework for drafting the proposals for action plans is elaborated in section 3. For each target region, section 4 describes the process for drafting the proposal for action plan, the key barriers and enablers for the development of RECs, the key actions to enhance the development of RECs and the next steps, i.e. after the project's lifetime. Section 5 consolidates the results of the four target regions and formulates the main lessons learned and conclusions.

2. Selection of the 4 target regions

For the selection of the target regions three criteria are taken into account. The 11 target regions in the different COME RES countries (i.e., Limburg, Noord-Brabant, Thuringia, Região Norte, Canary Islands, Balearic Islands, Latvia, Mazovia, Lesser Poland, Apulia Region, Norway) are scored for each of these criteria (see Table 1):

- Criterion 1: the general support or interest for the development of RECs in the target region.
- Criterion 2: the engagement of key actors (esp. national, regional and/or local policy makers) in drafting action plans for the target region.
- Criterion 3: the opportunity or momentum for drafting an action plan for the target region.

Based on the criteria in Table 1, the following 4 target regions are selected for drafting proposals for action plans to enhance the development of RECs in their respective regions.

Portugal - Região Norte: the interest in RECs is high in Portugal, which is reflected in a high number of participants in the country desk meetings/policy labs and thematic workshops. Although regional strategies for development of RECs are not envisaged in the short-term, it is considered relevant to develop an action plan at a smaller scale - e.g. metropolitan area - to support municipalities in their role as promoters and supporters of RECs.

Spain – Canary Islands: the interest in RECs is high in Spain, which is reflected in a high number of participants in the country desk meetings/policy labs and thematic workshops. There is an active participation of national and regional authorities in the meetings and a growing number of representatives from interested municipalities in the Canary Islands. There is a strong political will to promote RECs as catalysers for the energy transition in the Canary Islands, as well as the existence of promising examples with the potential to be extrapolated throughout the region (e.g. REC project “Energía Bonita” in La Palma). Currently, there is a favourable legislative framework in the Canary Islands, with special emphasis on the Canary Islands Climate Change and Energy Transition Law (LCCCTE), the Biodiversity Law and the Circular Economy Law.

Poland - Lesser Poland: although there is a general interest in RECs in Lesser Poland, the engagement of national and regional policy makers is currently low. The action plan is considered as an opportunity to engage with local policy makers and stakeholders and stimulate the development of RECs from bottom up. The attention of regional and national authorities may be triggered by interesting developments at the local level. Showcasing some good practices can stimulate the support from national governments and the interest of the general public to participate in a REC.

Italy – Apulia Region: the interest in RECs is high in Italy, which is reflected in a high number of participants in the country desk meetings/policy labs and thematic workshops. Under the Recovery and Resilience Plan (PNRR) 2.2 billion EUR will be allocated in the coming years for the establishment of RECs in Italian municipalities with less than 5,000 inhabitants. The establishment of this fund is

considered as an opportunity for drafting a proposal for action plan to further support the development of RECs in Apulia Region.

The following 7 target regions are not selected for drafting a proposal for action plan: Limburg, Noord-Brabant, Thuringia, Balearic Islands, Latvia, Mazovia and Norway.

Table 1: Criteria for selecting the target regions

Country	Target region	Criterion 1	Criterion 2	Criterion 3
		<i>General support or interest for development of RECs</i>	<i>Engagement of key actors in drafting action plan</i>	<i>Opportunity or momentum for drafting action plan</i>
Belgium	Limburg	low	low	low
Netherlands	Noord-Brabant	medium	low	low
Germany	Thuringia	medium	low	medium
Portugal	Região Norte	medium/high	medium	medium
Spain	Canary Islands	high	medium	high
	Balearic Islands	medium	low	low
Latvia	Latvia	medium	low	low
Poland	Mazovia	medium	low	low
	Lesser Poland	medium	medium	medium

Italy	Apulia Region	medium /high	medium	high
Norway	Norway	low	low	medium/low

3. Methodology for drafting action plans

The proposals for action plans are drafted in close collaboration with a core group of country desk members to support the development of renewable energy communities (RECs) in the selected target regions. The definition of the actions starts from the barriers and drivers for the development of RECs in the selected target regions. The actions are clearly defined with specific roles, responsibilities and priorities.

The **identification of the core group of country desk members** is based on deliverable D3.1 “Stakeholder involvement and engagement plans” and consists of the key players identified by means of the power- interest matrix (i.e. high influence and high level of interest). By involving the key players in the definition of the actions, ownership of the actions that goes beyond the lifetime of the COME RES project can be created.

The **identification of the key barriers and drivers** results from deliverable D2.3 “Case-studies of barriers and drivers for RES community energy in selected target regions”, thematic workshops, policy labs and/or the dedicated stakeholder consultations carried out in the frame of task 3.4. The key barriers and drivers are validated by the core group of country desk members.

The **actions** are defined together with the core group of country desk members by means of a workshop or series of workshops, depending on the level of interest, engagement and availability of the members. The workshop aims for:

- a shared understanding of the context of the proposal for action plan by presenting and discussing e.g. barriers and drivers for REC development in the target region, current status of the enabling framework for RECs, good practices and transfer roadmap¹.
- defining actions to remove key barriers and to reinforce enablers for REC development in the target region, taking into account the current status of the development of an enabling framework for RECs. Actions are clearly described (what?), key actors are identified (who?), and priorities between the actions are set (when?). A distinction is made between the lead actor and other key actors (the lead actor is encouraged to follow-up on the action after the COME RES project is finalized). In general, the actions defined in the proposal for action plan are deemed feasible by the stakeholders. A qualitative ranking (high, medium, low) of the actions is provided in terms of timescale and/or

¹ During the ‘transfer activities’ organised in frame of WP6, teams from mentoring regions were coupled to learning regions to share experiences and knowledge. The 4 teams of learning and mentoring regions that were selected for these transfer activities were the following: (1) Thuringia (Germany) and North Brabant (the Netherlands), (2) Apulia (Italy) and Flanders (Belgium), (3) Latvia and Piedmont (Italy), (4) Canary Islands (Spain) and Comunidad Valenciana (Spain). Different stakeholders from the learning region visited the mentoring region with the purpose of studying a single best practice for community energy. Next, a return visit of practitioners of the mentoring region to the learning region was organised to draw up a roadmap which describes tangible steps towards implementing (aspects of) the best practice in the learning region. Some of the actions defined in the transfer roadmap can also be considered for integration in the proposal for action plan for the target region.

impacts. Concrete time frames, based on the qualitative (priority) ranking, could be part of a potential monitoring scheme.

- an agreement with the core group of country desk members about the next steps, beyond the lifetime of the COME RES project such as further elaboration, implementation, monitoring of the actions.

The proposal for action plan is presented and discussed in a **policy lab**. If considered relevant, a follow-up meeting with the core group of country desk members is organised, e.g. back-to-back with the policy lab, to process the feedback from the policy lab and to adapt the actions.

4. Results per target region

This section describes for each of the 4 selected target regions (Canary Islands, Região Norte, Lesser Poland, Apulia Region) the process for drafting the proposal for action plan, the overview of validated barriers and enablers for REC development in the target region, the key actions for REC development in the target region and the next steps, i.e. after the lifetime of the COME RES project.

4.1. Target region: Canary Islands (Spain)

4.1.1. Process for drafting proposal for action plan

A **first scoping discussion** on the proposal for action plan with a core group of stakeholders from the Canary Islands took place on **6 October 2022**. The meeting was organised back-to-back with the 2nd Transfer Workshop (in the frame of WP6). During this discussion, key participants were informed about the objectives of task 3.5 and a preliminary work programme for the development of the action plan was drafted. In particular, the organisation of a policy lab in the framework of the international fair "CANAGUA AND ENERGY" was agreed as the main activity to be carried out for the development of the proposal for action plan.

The **Policy Lab for the development of an Action Plan for RECs** took place on **10 November 2022** in Las Palmas de Gran Canaria. The policy lab was organised after the actions were defined in the transfer roadmap for the Canary Islands (in the frame of D6.3), so that the identified barriers for the development of RECs and some of the proposed actions that were defined in the transfer roadmap could be integrated in the proposal for action plan for the Canary Islands.

The Policy Lab for the development of an Action Plan for RECs brought together **16 different types of stakeholders** (see Table 2 and Figure 1), including regional and local policy-makers, main energy agencies, energy transition offices and renewable energy communities at different levels of development. In terms of geographical coverage, given the scope of the proposal for action plan, regional stakeholders were involved, covering all the Canary Islands, as well as island stakeholders, specifically from the islands of Gran Canaria, Tenerife and La Palma. Representatives of ENERCOOP, the best practice selected in the frame of D5.3 and the mentor organisation for the transfer visits organised in the frame of WP6, also participated in the policy lab.

Table 2: List of participants of the policy lab

Name	Organisation	Type of stakeholder
José Luis Figueroa de la Paz	Head of Cabinet Ecological Transition Department (Canary Islands Government)	Policy-makers (regional - archipelago)
Alexis Lozano	Head of the Energy and Climate Department (Gran Canaria regional government)	Policy-makers (regional - insular)
Bárbara Falcón	Canary Islands' Green Offices	Public energy transition promotion offices (archipelago)
Pedro Apeles Díaz Ortiz	Cabildo de Tenerife's Renewable Energies Office	Public energy transition promotion office (insular - Tenerife)
Gonzalo Piernavieja	Technological Institute of the Canary Islands / Industrial REC "El Goro"	Research organisation, REC
Fidel Vázquez	El Rosario Local Government (Tenerife) / "El Rosario Solar" REC	Local government, REC
Carmela Díaz	Tacoronte Local Government (Tenerife) / Tacoronte REC	Local government, REC
Nuria Albet	La Palma Renewable	REC
Yaiza Santana	Oficina de Transformación Comunitaria y Transición Energética Gran Canaria	Public energy transition promotion office (insular – Gran Canaria)
Tatiana Gómez	Gran Canaria Energy Council	Energy agency (insular – Gran Canaria)
Julia Quintana	Gran Canaria Energy Council	Energy agency (insular – Gran Canaria)
Celso Rodríguez	Gran Canaria Energy Council	Energy agency (insular – Gran Canaria)
Lionel Torres	La Palma Promotion and Economic Development Society (SODEPAL)	Energy agency (insular – La Palma)
Yolanda Felipe	La Palma Promotion and Economic Development Society (SODEPAL)	Energy agency (insular – La Palma)
Joaquín Mas	ENERCOOP	REC
Jorge Martínez	TRAGSA	Research organisation / public enterprise
Maria Rosaria Di Nucci	Freie Universitaet Berlin / COME RES Project Coordinator	COME RES facilitator
Nicoletta del Bufalo	Ecorys	COME RES facilitator

Irene Alonso	Ecorys	COME RES facilitator
Antonio Betancor	Ecorys	COME RES facilitator
Xenia Giménez	ACER	COME RES facilitator

Figure 1: Participants of the policy lab



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The **selection of the participants** was based on two criteria: 1) first-hand knowledge of the current barriers and enablers for REC development, given by their experience; 2) influence in the policy-making process to adopt adequate measures. In the following paragraphs, we provide an overview of the motivations for involving each of the selected types of stakeholders:

- **Regional and sub-regional policy makers:** in the Spanish target region (the Canary Islands), four main levels of governance may be identified: national (state), regional (government of the archipelago), sub-regional (individual islands’ governments are named “Cabildos”) and local (municipalities within each island). In the policy lab we focused on bringing together stakeholders both at regional (archipelago) and subregional (island) levels, given their influence in the decision-making process affecting RECs.
- **Municipalities:** representatives from municipalities can provide first-hand knowledge of existing administrative procedures affecting the creation of renewable energy communities, as well as relevant considerations on public procurement, level of training of human resources, etc. The municipalities that were involved in the policy lab, also engaged in the transfer visits (in the frame of WP6) and showed a strong willingness to promote the creation of RECs in their territories, with a focus on promoting the use of public spaces and roofs for renewable energy installations.

- REC promoters and members: these stakeholders provide valuable insights based on their experience on-the-ground in developing RECs. They have a deep understanding of the challenges and barriers which affect RECs directly and are specific to the territory. In particular, the RECs invited to the policy lab are at different stages of development. Some are in the early process of elaborating their internal regulations, while others are quite ahead in the technical planning phase, having secured funding for the installation of their renewable projects. This allowed for a richness of perspectives and for the identification of different types of barriers during the different phases of REC development.
- Energy agencies/councils and research organisations: these organisations are selected for their strong understanding of the technical and geographical aspects hindering and/or potentially supporting the development of RECs, with a focus on grid capacity and availability of connection points – closely linked with the feasibility of renewable energy installations; as well as spatial planning considerations.
- Energy transition offices: the network of energy transition delegations in the Canary Islands, named “Oficinas Verdes” or “green offices”, together with the recently created island-specific offices to support the development of renewable energy projects in Tenerife and Gran Canaria will play a very active role as enablers in the promotion and the development of local renewable energy communities in the region. In particular, they provide information and tailored advisory services to citizens and local entities about the existing support mechanisms and schemes for RECs (i.e. information on grants, subsidies, strategies and all kinds of initiatives that can support the energy transition in general, and RECs specifically). For instance, the Renewable Energies Office in Tenerife is providing technical and advisory services to the municipality of Tacoronte to set up their REC.

On the one hand, **the policy lab aimed** to discuss and validate the main barriers and enablers for the uptake of renewable energy communities in the Canary Islands, as previously reflected upon in the Spanish country desk dialogues and taken stock of in different COME RES project deliverables. On the other hand, and as the key goal of the occasion, the policy lab offered the opportunity to discuss concrete actions for REC development in the Canary Islands, which could be led by the stakeholders involved in the policy lab (or carried out in collaboration with other key actors).

Table 3: Agenda of the policy lab

Time	Activity
09:30-9:45	Weclome: Nicoletta del Bufalo, ECORYS Spain
9:45-10:00	COME RES methodology for the development of regional action plans: Maria Rosaria Di Nucci, COME RES project Coordinator
10:00-10:15	Baseline for the development of an action plan in the Canary Islands: Irene Alonso, ECORYS Spain
10:15-10:30	Current situation of renewable energies in the Canary Islands: José Luis Figueroa, Head of the Ecologic Transition Department of the Canary Islands Government.
10:30-10:45	<i>Coffee break</i>
10:45-12:30	Round Table: Development of the action plan for the Canary Islands (All)
12:30	Final summary and conclusion: Nicoletta del Bufalo, ECORYS Spain.

The **main tools and approaches used** for drafting a proposal for action plan for the Canary Islands include:

- Synthesis of relevant information on barriers and drivers for REC development in the Canary Islands (D2.3), lessons learned from good and best practices (D5.3) and the status of the enabling framework for RECs in Spain (D7.1)).
- Review of the outcomes from dedicated stakeholder consultations (i.e., focus group interviews carried out in the framework of D2.3, the survey developed in T3.4, and previous workshops and policy labs organised by the Spanish country desk in the Canary Islands).
- Additional desk research and literature review on the current policy context in the Canary Islands.
- As mentioned above, a dedicated policy lab, which took place in person with stakeholders from the Spanish country desk. A “tour de table” discussion (see Figure 2), moderated by the ECORYS project team, was guided by the topics in the matrix (see Figure 3), which constitute the main elements for the development of an enabling framework for RECs, in line with the barriers identified and validated by the participating stakeholders. The matrix was projected on a large screen and was filled in real time by one of the facilitators with the inputs from participants. As a result, 11 actions were proposed to enhance the development of RECs in the Canary Islands, and later on consolidated by the ECORYS and ACER project team.

- In the aftermath of the policy lab, the project team from ECORYS and ACER carried out a synthesis and fine-tuning exercise of the actions proposed, filling in the remaining gaps of information (particularly concerning the actors to be involved in each action) with concrete suggestions. The refined proposal for action plan was then circulated for approval by the stakeholders.

Figure 2: “Tour de table” discussion



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Figure 3: Matrix used to guide “tour de table” discussion



Areas of development	Priority (high / medium / low)	Proposed actions
Removal of legal/administrative barriers		• E.g.: Corrective measures in the case of non-compliance in terms of timeframe and response
Integration of RECs in spatial and urban planning		• E.g.: Definition of priority areas of deployment
Improving cooperation with the distribution network		• E.g.: Adequacy of access and connection procedures; Transparency of access and connection costs; Improved communications with electricity companies.
Access to financing		• E.g.: Access to funding mechanisms (public and private)
Access to information about RECs		• E.g.: Knowledge about RECs; Civic participation
Specific support schemes for RECs		• E.g.: Citizens' Advice Offices
Establishment of quantitative political targets		• E.g. Strategies, action plans, etc.
Tax exemptions and other fiscal measures		• E.g.: Elimination of VAT on self-generated electricity, personal income tax deductions

Source: ECORYS & ACER (10/11/2022)

4.1.2. Barriers and enablers for REC development

As mentioned in the previous paragraph, the **main barriers and enablers** for the uptake of renewable energy communities that were identified during the COME RES project activities, were discussed with and validated by the stakeholders during the Policy Lab for the development of an Action Plan for RECs. Following barriers and enablers at the national level (Spain) and the regional level (Canary Islands) were considered most relevant.

Table 4: Main barriers for REC development

Barriers for REC development	
National	<ul style="list-style-type: none"> ● The definition of RECs in Spanish legislation is a carbon copy of the definition in the RED II, without any elaboration on what each term means (autonomy, effective control, voluntary participation, proximity). Therefore, RECs face regulatory uncertainty and often resort to the legal framework of collective self-consumption. ● Existing technical restrictions for collective self-consumption in terms of grid capacity limits, grid connection limitations or geographical constraints (i.e., in isolated rural areas with limited grid access) are a barrier for self-consumption in many buildings used by business, industry or public authorities. ● There is no concrete delimitation of the types of legal entities that could be used to develop RECs. ● No regulatory authority has been given powers to oversee the definition of and compliance with RECs.
Regional	<ul style="list-style-type: none"> ● Need for advice, at different levels: <ul style="list-style-type: none"> ○ Public law: use and cession of municipal spaces. ○ Programming of project phases. ○ Regulation of the electricity sector. ○ Technical and market regulation in the energy sector. ● Need for better cooperation with the distribution network (distributors and marketers). ● Lack of access to information on energy communities. ● Lack of associative and/or cooperative culture. ● Need for public funding.

Table 5: Main enablers for REC development

Enablers for REC development	
National	<ul style="list-style-type: none"> ● Specific support schemes covering different phases of REC development have been or are being developed. To some extent, Spain can be seen as an exemplar for the development of an integrated and holistic approach to support RECs. Approximately 100 million will be mobilised to promote, support and develop RECs through the Recovery, Transformation and Resilience Plan. ● Unlike most of the countries examined by COME RES, the government has taken important steps to comply with the RED II requirement for Member States to develop a cost-benefit analysis for distributed generation. ● In the case of collective self-consumption, no network charges are levied for electricity exchanges within the same scheme². ● The Spanish government has also taken steps to take into account the specificities of RECs in the design of its auction system for renewables-based electricity.
Regional	<ul style="list-style-type: none"> ● Access to national support schemes for the creation of energy communities. ● Regional support schemes for photovoltaic self-consumption, although they are not specific for RECs (among others, subsidies for renewable energy self-consumption installations in the residential sector, battery storage and renewable thermal systems in the Canary Islands). ● Creation of Green Offices of the Canary Islands (OVC) and other bodies at the island level, such as the Renewable Energy Office of the Cabildo of Tenerife, which facilitate access to information and provide tailored advice.

² This is a significant advantage as the network charges for residential consumers represent a considerable percentage of their electricity bills. On average the network charges for households in 2022 amounted to 51.64 euros per MWh. Source: <https://www.cnm.es/prensa/peajes-transporte-y-distribucion-electricidad-2022> (accessed 30/11/2022).

4.1.3. Proposal for action plan to support REC development

The following table gives an overview of the 11 actions defined for the development of RECs in the Canary Islands. The actions are clearly described, key actors are identified and priorities between the different actions are set.

Table 6: Overview of actions, key actors and priorities

Action	Description	Key actor(s)	Priority
<p>Action 1: propose mechanisms to facilitate the installation of renewables on the roofs of public buildings.</p>	<p>In order to carry out this action, the creation of a working group is proposed to search for solutions that are valid for all municipalities, thus avoiding decentralized and individual work.</p> <p>Similarly, a model could be designed to serve as a template for the overall formation of an energy community, as well as statutes and internal regulations of RECs at the local level. It is necessary that there are models and templates for every single step required in the formation of energy communities, as it would highly facilitate the bureaucratic process.</p> <p>In addition, it is recommended that a review of municipal ordinances is carried out to analyse which issues limit the maximum use of roofs.</p>	<ul style="list-style-type: none"> ● <i>Cabildo de Tenerife's Renewable Energy Offices</i> ● <i>Community Transformation and Energy Transition Office</i> 	<p><i>High</i></p>
<p>Action 2: promote the simplification of administrative procedures for self-consumption projects with power over 100kW, adapting regional regulations to state regulations.</p>	<p>At the national level, the first paragraph of article 53.3 of Real Decreto-Ley 18/2022 has been modified, in which it has been agreed that installations of less than 500 kilowatts (kW) do not have to obtain a prior construction authorisation, a limit that previously was set at 100 kW. It is important to adapt the Canary Islands legislation in this line and to speed up the time periods for authorisations.</p>	<ul style="list-style-type: none"> ● <i>Directorate General for Energy, Department of Ecological Transition and Fight Against Climate Change and Territorial Planning of the Canary Islands</i> 	<p><i>High</i></p>
<p>Action 3: promote the hiring and training of human and material resources to speed up</p>	<p>To improve training, online or face-to-face training programs could be prepared that base their content on other courses or training that have</p>	<ul style="list-style-type: none"> ● <i>Green Offices (coordinate content and provide training)</i> 	<p><i>High</i></p>

<p>administrative procedures in relation to RECs in city councils and local governments.</p>	<p>been effective in other autonomous communities or in other COME RES regions. Facilitating the transfer of good practices between regions is key to achieving this objective. To finance these training activities, funds may be leveraged from the IDAE's "CE-APRENDE" call, one of the funding lines announced in 2021 as part of the national support program for Renewable Energy Communities. In addition, it must be noted that not only newly hired personnel is to be trained, but also already existing personnel and local governors must be trained in order to improve their competences and their sharing capacities within their team and municipality.</p>	<ul style="list-style-type: none"> ● <i>FECAM (federation of municipalities) (dissemination)</i> ● <i>Municipalities (training beneficiaries)</i> 	
<p>Action 4: advocate for the reform of Article 61 of the Law of the Land and Protected Natural Spaces of the Canary Islands to make agricultural practice compatible with energy production through photovoltaic agriculture.</p>	<p>Complementary uses are currently only allowed for farmers. There is a need to allow for the combination of use by farmers and other entities/types of stakeholders.</p>	<ul style="list-style-type: none"> ● <i>Directorate General for Energy, Department of Ecological Transition and Fight Against Climate Change and Territorial Planning of the Canary Islands</i> 	<p><i>Medium-High</i></p>
<p>Action 5: promote greater electrical/energy capacity at existing access and connection points.</p>	<p>To carry out this action, zoning of the territory is necessary, which would potentially solve many of the existing barriers in the territorial framework of the Canary Islands. It is necessary to regulate in some way, so that the distributor grants the connection points for self-consumption installations automatically, as long as</p>	<ul style="list-style-type: none"> ● <i>Directorate General for Energy, Department of Ecological Transition and Fight Against Climate Change and Territorial Planning of the Canary Islands (zoning)</i> ● <i>Distribution network</i> 	<p><i>High</i></p>

	these installations have an associated nearby consumption (within the legally permitted radius).	<ul style="list-style-type: none"> ● <i>Gran Canaria Energy Council</i> 	
<p>Action 6: establish a bilateral dialogue table between electricity distributors and public entities to improve transparency on available connection points and their capacity (lack of a map).</p>	<p>Several issues could be included in this dialogue, but mainly it urges the modelling of a framework that shows the real power availability in the different transformer stations of the Canary Islands. In this way, the situation of the network could be monitored in real time. This has already been done in the Balearic Islands and could be a good practice to be transferred to the Canary Islands.</p> <p>To carry out this action, the possibility of establishing an energy roundtable at the regional level could be considered to promote the creation of forums and synergies to help the creation of protocols.</p>	<ul style="list-style-type: none"> ● <i>Cabildo de Tenerife's Renewable Energy Offices</i> ● <i>Community Transformation and Energy Transition Office</i> ● <i>Energy/Electricity Distributors</i> 	High
<p>Action 7: empower industrial RECs</p>	<p>Disseminate and export the El Goro industrial REC model³ to other industrial parks in the Canary Islands (140 in total).</p> <p>In particular, promote development and research in the area of renewable storage in terms of photovoltaic RECs in industrial parks with large consumption peaks.</p> <p>The concept of "energy islands", with micro networks and demand management, is considered</p>	<ul style="list-style-type: none"> ● <i>Gran Canaria Energy Council</i> ● <i>Technological Institute of the Canary Islands (R+D+i)</i> ● <i>Cabinet of Ecological Transition Department (Canary Islands Government)</i> 	High

³ The project "Canaluz Infinita" is a pilot industrial REC project located in the industrial park of El Goro, on the island of Gran Canaria. It aims to install between 60 and 70 MW of photovoltaic and wind power for the self-consumption of the companies based within the industrial park, through an internal micro-grid of their own. It also aims to provide environmental services to the local community and sharing energy with nearby urban centres and other areas within its remit. Source: Canaluz Infinita (2021), available at: <https://canaluz.es/PDF/goro.pdf> (accessed 30/11/2022).

	<p>highly innovative and transferable to other island contexts.</p> <p>In addition, there must be efforts to align both RECs with industrial RECs through ecologic transition policies.</p>		
<p>Action 8: inform the population in a more efficient and effective way about the energy transition and the concept of a renewable energy community.</p>	<p>To this end, local campaigns could be carried out to inform about the advantages and objectives of RECs, as well as to encourage citizen involvement in their development and implementation.</p> <p>The Office of Community Transformation should be used more effectively in order to disseminate pertinent information to the public about RECs. Carry out workshops to explain to the participants the concept of RECs. The IDAE had 2 additional lines of support to CE-IMPLEMENTA, among them the community transformation offices, which is fundamental.</p>	<ul style="list-style-type: none"> ● <i>Green Offices (coordinate)</i> ● <i>Municipalities (disseminate) – especially those who are more advanced can pass on their experience as spokespersons and multipliers.</i> ● <i>RECs on the Canary Islands (support)</i> 	<p><i>High</i></p>
<p>Action 9: avoid overlapping problems at the municipal and regional level between renewable energy communities.</p>	<p>A roadmap should be created to prevent RECs from overlapping with each other and thus promote a certain level of territorial coordination.</p>	<ul style="list-style-type: none"> ● <i>Cabildo de Tenerife's Renewable Energy Offices</i> 	<p><i>Medium</i></p>

<p>Action 10: accelerate the estimated waiting time for the declaration of public social interest of renewable energy communities.</p>	<p>Currently, the estimated waiting time is two years for recognition. Therefore, shortening this time could be fundamental.</p>	<ul style="list-style-type: none"> ● <i>Directorate General of Energy of the Canary Islands</i> 	<p><i>Medium-High</i></p>
<p>Action 11: promote tax exemptions for the installation of renewable energy communities.</p>	<p>Tax exemptions (on e.g., IGIC⁴) should be promoted for the installation of renewable energy communities.</p>	<ul style="list-style-type: none"> ● <i>Canary Islands Regional Government</i> ● <i>Regional Governments</i> ● <i>Municipalities</i> 	<p><i>Medium-High</i></p>

⁴ IGIC= an indirect tax that taxes consumption in the Canary Islands

4.1.4. Next steps

Once the proposal for action plan is validated by stakeholders involved in the policy lab, it will be further **disseminated by ECORYS and ACER**, by circulating it among all members of the Spanish country desk, and publishing it on the COME RES project website. The stakeholders involved will also be encouraged to promote the proposal for action plan and make it visible through their own communication channels.

In parallel, ECORYS and ACER will **follow up the process of implementation** of the high-priority actions until the end of the COME RES project, providing support where needed. Once the COME RES project is finalised, the responsible actors of each action, as defined in the action plan, will oversee its implementation. If deemed relevant by the stakeholders involved, a **monitoring system** with concrete targets to support the implementation of the action plan will be proposed by ECORYS and ACER.

4.2. Target region: Região Norte (Portugal)

4.2.1. Process for drafting proposal for action plan

The process for drafting the proposal for action plan for Região Norte or the Norte Region comprised following steps: validation of the main barriers and drivers; elaboration of a draft action plan with a limited number of stakeholders; and validation of the action plan and identification of priorities. Given the limited competences at the regional level to promote the implementation of RECs, the objective was to identify actions that could be implemented mainly at local and national level to promote community energy initiatives in the whole Norte Region.

The **validation of the main barriers and drivers** for the dissemination and implementation of RECs in Portugal was accomplished in the **2nd meeting of the Portuguese country desk**, held online on **15 February 2022**. The meeting was attended by 29 stakeholders and market actors. The barriers and drivers identified in the focus group interviews (in the frame of T2.3) were presented and discussed with the stakeholders participating in the meeting, along with other results from the COME RES project. Within this meeting, the presentation of the most recent legislative documents with implications for RECs (Decree-Law n°15/2022) by Ivone Rocha (Telles Advogados), also prompted the discussion on which barriers have been overcome or reduced and which are still significantly hampering the implementation of RECs. The participation was limited to the stakeholders taking part in the Portuguese country desk but nevertheless covered a wide range of stakeholders, from energy cooperatives to local authorities, system operators, research organisations, policy makers and other. The group of participants was also diverse in terms of geographical scope of action, with local, regional and national actors.

The **elaboration of a first draft for the action plan** for the Norte Region took place online, on **17 November 2022**. The participation was restricted to a very small number of key stakeholders (5) in order to foster a highly interactive and dynamic brainstorming session.

The participants were selected based on the following criteria: (1) deep knowledge on the main barriers and drivers for the implementation of RECs in the Norte Region; (2) good understanding of the local context; and (3) coverage of different levels of intervention – from community, to local, sub-regional and national level. Table 7 lists the participating entities, identifying the group of stakeholders they belong to.

Table 7: List of participants in the session dedicated to the development of the draft action plan

Institution/name	Type of institution	Level of intervention
n.a	Citizen	Community
Agência de Energia do Porto (AdE Porto)	Local Energy Agency	Metropolitan area
Agência de Energia do Porto (AdE Porto)	Local Energy Agency	Metropolitan area
Cooperativa Energética do Vale d’Este	Energy Cooperative	Local
DECO Proteste	Consumer Association	National

The meeting to elaborate a first draft of the action plan for Norte Region proceeded in three steps:

(1) An introductory presentation, given by Isabel Azevedo (INEGI), comprising the aim and agenda of the meeting, as well as the COME RES results on the main barriers and drivers for RECs, to be used as a starting point for the brainstorming exercise. Given the fact that both the focus group interviews (in the frame of T2.3) and the stakeholder consultation (in the frame of T3.4) resulted in the identification of barriers and drivers, the outputs of these two activities were combined and presented to the participants, resulting in an additional validation of the project results on this matter. Moreover, the stakeholder consultation results on the necessary actions for a wider implementation of RECs (in the frame of T3.4), were also presented to provide some inspiration for the discussion.

(2) A brainstorming session, where all participants were asked to identify actions which they considered necessary to accelerate the implementation of RECs in Portugal, with a focus on the Norte Region. The brainstorming was done through active discussion, and all the participants had several opportunities to identify new actions as well as to react to proposed actions. This part of the session lasted between one and one and a half hours. Throughout the discussion, Isabel Azevedo (INEGI), who acted as moderator of the session, filled a digital board with all the ideas, disaggregating the actions by level of implementation (national, regional, and local). Figure 4 presents the digital whiteboard at the end of the session.

(3) A systematisation of the proposed actions, with an overview of the different proposed actions and key actors responsible for their implementation. This moment was important to ensure that the proposed actions were all listed and properly characterised.

Figure 4: Whiteboard summarizing the output from the brainstorming session

1a FASE					
Brainwriting					
<p>Ideias-chave para a promoção dos CER em Portugal, com foco na Região Norte: O que tem de ser feito para que os CER se tornem uma realidade? Quem deverá ser envolvido na sua implementação e de que forma?</p> <p style="text-align: right;">20 mins</p>					
NACIONAL	REGIONAL	CIM	LOCAL	COMUNIDADE	...
<p>Ação: Clareza relativamente à distância</p> <p>Atores</p> <p>Prioridade</p>	<p>Capacitação das entidades regionais e locais</p> <p>ADENE / DGEG Formadores certificados (DE) Universidades</p>	<p>OSS - Balcão de apoio</p>		<p>ID - software para gestão de energia open source</p>	
<p>Facilitar interação com entidades reguladoras</p> <p>DGEG / ERSE / DSOs</p>	<p>Promoção de CER através dos consumidores finais</p> <p>DECO Quando houver casos práticos</p>	<p>Lista de EGACs</p>		<p>Chegar às pessoas</p>	
<p>Criação de projetos piloto, como ponto de partida de regulação</p>	<p>Criação de agregadores com volume que permita gestão de risco</p>	<p>Gestoras de processo - com ligação direta a entidades nacionais</p> <p>Agências de Energia / CMS</p>	<p>Clarificar o conceito de EGACs</p>	<p>Projetos mais pequenos para dar o exemplo</p> <p>Membros ativos comunidade</p>	
<p>Relação com o DSO / sem restrições técnicas</p>			<p>Compromisso político para a criação de CER</p> <p>Municípios</p>	<p>Criação de confiança no conceito</p> <p>Cooperativas e iniciativas já existentes</p>	
<p>Lista de EGACs</p> <p>DGEG</p>			<p>Modelos estáveis para os consumidores - contratos bilaterais</p> <p>Quem:</p>		
<p>Sessão de esclarecimento / FAQs</p>			<p>Divulgação de resultados de pilotos - bons e maus</p> <p>Pilotos / ERSE / DGEG</p>	<p>Gua por fases de processo - Manual Passo a Passo</p> <p>Agências de Energia</p>	

Source: INEGI (17/11/2022)

The **validation of the proposal for action plan and identification of priorities** was done during the 2nd Thematic Workshop and Policy Lab of the Portuguese country desk. The online event was held on **22 November 2022** and was open to all interested participants upon registration.

The level of participation was considerably high, with **95 participants** covering a diverse group of market actors and stakeholders, including energy cooperatives, local authorities and energy agencies, systems operators, energy suppliers, research organisations, policy makers and other. Key actors for the implementation of the proposed actions, as the National Energy Agency (ADENE), the Directorate-General for Energy (DGEG), local authorities and local energy agencies, corresponded to a significant share of the participants.

The event was organised in **three sessions**: a session dedicated to policy actions and measures to promote the implementation of RECs in Portugal; a session dedicated to the dissemination of best practices from Belgium and Italy; and one interactive session dedicated to the validation of the action plan and identification of priorities. The agenda of the event is presented in Table 8.

Table 8: Agenda of the 2nd Thematic Workshop and Policy Lab of the Portuguese country desk

14:15	<p>Welcome <i>Isabel Azevedo (INEGI)</i></p>
14:30	<p>Policies and actions for the promotion of RECs in Portugal <i>Filipe Araújo (Municipality of Porto)</i> <i>Bruna Tavares (FELPT - Future Energy Leaders Portugal)</i> <i>Manuel Casquiço (ADENE – National Energy Agency)</i> <i>António José Baltazar (DGEG – Directorate General for Energy)</i></p>
16:00	<p>Good practices – Success cases in Europe <i>Sophie Loots (ZuidtrAnt, BE)</i> <i>Sergio Olivero (Energy City Hall, IT)</i></p>
16:30	<p>Action Plan – Interactive session <i>Isabel Azevedo (INEGI)</i></p>

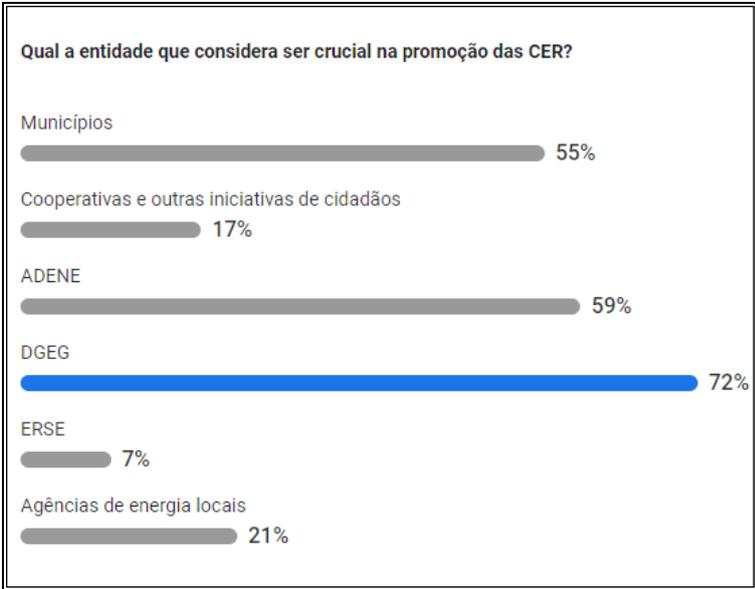
The **aim** of the **first session** was to provide insights to the participants on what is being done and/or planned by different policy makers regarding the promotion of RECs and stimulate the discussion on what is still missing, as a starting point for the definition of priorities for the Norte region. The speakers included: (1) Filipe Araújo, Vice-President of the Municipality of Porto, who presented the perspective of the municipality of Porto on RECs and their actions towards the acceleration of RECs implementation at the local level; (2) Bruna Tavares, Member of Future Energy Leaders Portugal (FELPT), who provided the FELPT’s perspective on the role of RECs for the future energy system; (3) Manuel Casquiço, Director of ADENE’s Programmes and Initiatives Department, who gave some insights on the most recent actions promoted by the national energy agency as well as foreseen initiatives; and (4) António José Baltazar, Head of DGEG’s Licensing Division, presenting the status quo in terms of ongoing licensing procedures for self-consumption and RECs, as well as some of the most recent actions promoted by DGEG to accelerate and simplify the licensing procedure applicable to RECs and collective self-consumption.

The **second session**, dedicated to the dissemination of good practices from other European countries, included the following speakers: (1) Sophie Loots, Member of the Energy Cooperative ZuidtrAnt (Belgium); and (2) Sergio Olivero, President of the Scientific Committee of Comunità di Energia Rinnovabile di Magliano Alpi (Italy).

The event ended with an **interactive session** aiming at the validation of the draft action plan developed by the small group of stakeholders in the previous week, and the identification of priorities among the different actions. As a starting point for the interactive session, Isabel Azevedo (INEGI) briefly presented

the main barriers and drivers identified in task 2.3 and task 3.4 of the COME RES project, as well as all the actions resulting from the brainstorming session with the smaller group of stakeholders. Once the participants were acquainted with the draft action plan, including potential lead actors, they were asked to participate in the identification of priority actions, as well as of the key actors for the promotion of RECs. The participants interacted via the *slido* application, being asked the following questions: (1) What entity/entities is/are crucial for the promotion of RECs? (see Figure 5); (2) Order by level of priority the actions necessary for the implementation of RECs in Portugal? (see Figure 6) and (3) What is still missing to ensure a large-scale dissemination of RECs and other renewable energy communities? (see Figure 7). The workshop participants were also invited to propose new actions, not considered in the draft action plan. Nonetheless, no additional actions were proposed.

Figure 5: Responses from participants in the interactive session to the question “What entity/entities is/are crucial for the promotion of RECs?”



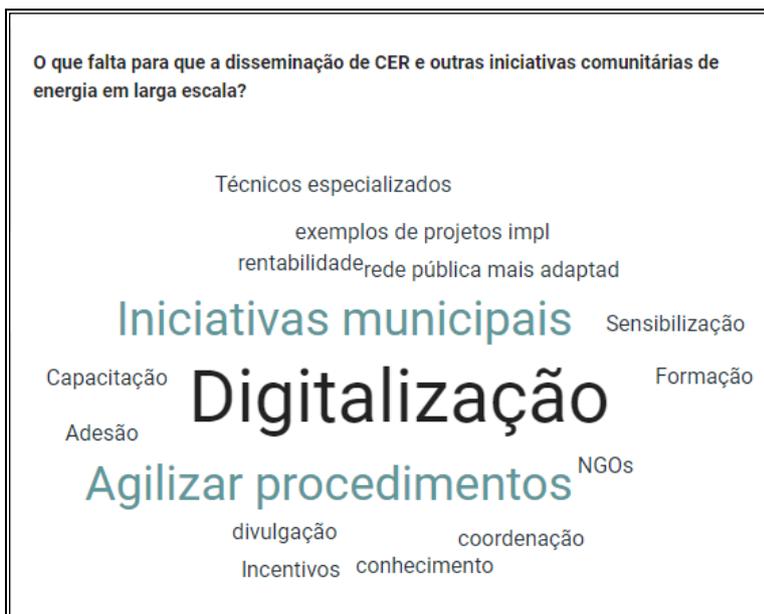
Source: INEGI (22/11/2022)

Figure 6: Responses from participants in the interactive session to the question “Order by level of priority the actions necessary for the implementation of RECs in Portugal?”



Source: INEGI (22/11/2022)

Figure 7: Responses from participants in the interactive session to the question “What is still missing to ensure a large-scale dissemination of RECs and other renewable energy communities?”



Source: INEGI (22/11/2022)

4.2.2. Barriers and enablers for REC development

The stakeholders involved in the three meetings, mentioned in the previous sections, validated the **barriers and drivers** that were identified in task 2.3 and task 3.4 of the COME RES project. Overall, the experience and knowledge from the different stakeholders confirmed the previously obtained results, providing a robust and comprehensive identification of the main barriers and enablers for REC development in Portugal, and specifically in the Norte Region.

Table 9: Main barriers for REC development

Barriers for REC development
<ul style="list-style-type: none"> ● Complexity and lack of transparency of existing regulation and provisions applicable to RECs and collective self-consumption, requiring the support of legal and technical experts to assess the viability and scope (i.e., geographical coverage, RES technology, ...) of the different initiatives; ● Burdensome and lengthy registration and licensing processes. Despite the recent efforts to simplify and accelerate the processes, these are still hampering the wide deployment of RECs, including the initiatives recognised as pilot projects; ● Administrative barriers associated with the design and operation of RECs, namely regarding the identification of members and the definition of internal rules or procedures. The need for professionalization of citizens or entities who could be responsible for the establishment and management of RECs was confirmed as one of the main barriers; ● Reduced knowledge and acceptance of the concept by society, due to the lack of concrete examples and the limited dissemination of good practices and lessons learned among local communities and other potential promoters of RECs.

Table 10: Main enablers for REC development

Enablers for REC development
<ul style="list-style-type: none"> ● Provision of dedicated support, accompanying the different phases of implementation of a REC. This could include support in defining the concept, attracting members and implementing the project; ● Potential economic benefits, associated with the sale of electricity and/or the saving on electricity bills; ● Participation of local authorities or other locally-based, trusted entities in the REC's development process, as a promoter, member, investor or other role.

4.2.3. Action plan to support REC development

Following table gives an overview of the 8 actions identified by the small group of stakeholders for development of REC in the Norte Region. The actions are described, the key actors are identified and

the priorities between actions are set. The first two features were defined by the small group of stakeholders, while the priority level was defined during the 2nd Thematic Workshop and Policy Lab, as part of the interactive session.

Table 11: Overview of actions, key actors and priorities

Action	Description	Key actor(s)	Priority
Action 1: demystifying the REC concept for local communities.	Dissemination of the REC concept at the community level, by entities that have already the citizens' trust. This can be achieved by the implementation of concrete projects (small scale, and proof of concept) and dissemination of success cases	<ul style="list-style-type: none"> ● <i>Municipalities</i> ● <i>Cooperatives and other entities with strong links to the consumer/citizen (as consumer associations)</i> 	<i>High</i>
Action 2: information sessions.	<p>Holding periodic information sessions with licensing entities (or linked organisations) to clarify specific doubts from promoters and members of RECs regarding eligibility, scope of action and other.</p> <p>Development of a document with the FAQs from the periodic sessions, which will be continuously updated, and will contain relevant information for potential promoters.</p>	<ul style="list-style-type: none"> ● <i>ADENE (National Energy Agency)</i> ● <i>DGEG (Directorate-General for Energy - which will support ADENE to clarify the questions associated with the licensing and eligibility procedures)</i> 	<i>High</i>

<p>Action 3: training and capacity building of local and regional authorities.</p>	<p>Development of a training course dedicated to local and regional authorities, so that they have the capacity to support citizens and local SMEs with RECs implementation. The course's content should be defined by ADENE and DGEG, to ensure that it contains all required information.</p>	<ul style="list-style-type: none"> ● <i>ADENE and DGEG</i> ● <i>Universities and other specialised instructors</i> 	<p><i>High</i></p>
<p>Action 4: lessons learned from pilot projects.</p>	<p>Disclosure and dissemination of the results of pilot projects, being successful or unsuccessful, in order to identify concrete drivers and barriers. The drivers will support the dissemination of RECs and will lead to an increased trust in the concept. The barriers gathered from the lessons learned can support in the adaptation of existing regulation and procedures.</p>	<ul style="list-style-type: none"> ● <i>Pilot promoters</i> ● <i>DGEG and ERSE (regulator)</i> 	<p><i>Medium</i></p>
<p>Action 5: (local) process managers.</p>	<p>Creation of the role of (local) process manager, a person that would accompany potential REC promoters throughout the whole process – from the concept development to the operational phase. These managers are local technicians/technical staff (from energy agencies, local authorities), with direct link with the regulatory authorities and licencing entities.</p>	<ul style="list-style-type: none"> ● <i>Local authorities and energy agencies</i> ● <i>DGEG</i> 	<p><i>Medium</i></p>

<p>Action 6: (local) one-stop-shops.</p>	<p>Local support desk for potential promoters of RECs, from concept development to financing, implementation and operation. These desks will be implemented in parallel with the development of a detailed guide for RECs, adapted to the local context.</p>	<ul style="list-style-type: none"> ● <i>Local energy agencies an DECO (consumer association)</i> 	<p>High</p>
<p>Action 7: local targets for RECs.</p>	<p>Establishment of political commitment (and specific targets) for RECs implementation at the local and/or regional level. The goal of this action is to prompt a stable political context for REC initiatives.</p>	<ul style="list-style-type: none"> ● <i>Local and intermunicipal authorities</i> 	<p>Low</p>
<p>Action 8: bilateral contracts for the excess electricity.</p>	<p>Bilateral agreements for the purchase of RECs' excess electricity (at a fixed price), in order to guarantee a stable business model and minimise the risk of investment.</p>	<ul style="list-style-type: none"> ● <i>Municipalities and/or intermunicipal authorities</i> 	<p>Low</p>

4.2.4. Next steps

The next steps depend on the priority and level of detail of the proposed actions:

- As most of the actions are still lacking detail, the idea is to promote and communicate the proposal among the suggested key actors, and to **stimulate further discussion** amongst the actors on how the actions could be implemented and monitored in an effective manner;
- Few actions are already planned by ADENE, such as the information sessions and the training and capacity building. For the planned actions the objective is to **monitor** their implementation and suggest improvements, if necessary. During the project's lifetime, the monitoring procedure can be part of COME RES activities. After the end of the project, ADENE, being interested in ensuring the effectiveness of their actions, will monitor the outcomes.

4.3. Target region: Lesser Poland (Poland)

4.3.1. Process for drafting proposal for action plan

A **first discussion on the proposal for action plan** took place **on 10 November 2022**. The meeting was organised back-to-back with the 2nd Thematic Workshop on the development of community energy in Poland (in the frame of WP3). A **core group of stakeholders** (see Figure 8) participated in the meeting, such as representatives of the Polish Green Network, Hubcoop (REC incubator), the Association of Energy Agencies, ClientEarth and WWF. The process of drafting a proposal for action plan was presented and discussed. The selection of Lesser Poland as the target region for drafting a proposal for action plan was confirmed by the participants.

Figure 8: Scoping meeting in preparation of policy lab



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A **policy lab** was organised **on 2 December 2022** to further discuss potential actions for development of RECs in Lesser Poland. The policy lab was held online and brought together **12 stakeholders** from the regional and local level, such as policy-makers, local governments, the main energy agencies, representatives of renewable energy communities at different levels of development, RES companies and research organisations (see Table 12). The following types of stakeholders can be distinguished:

- Regional policymakers who are interested in supporting and encouraging local government officials to establish RECs.
- Local governments officials who are directly involved in the establishment of RECs and are experiencing administrative, organisational and financial problems.
- REC promoters and members that are directly confronted with the challenges related to the establishment and operation of RECs.
- Energy agencies and research organisations that are advisory bodies for RECs and provide the technical (network) and scientific (law, sociology, economics) knowledge and expertise for a more efficient operation.

Table 12: List of participants of the policy lab

Name	Organisation	Type of stakeholder
Marcin Jaczewski	Head of the Department of Prosumer and Distributed Energy	Policymaker
Tomasz Koprowiak	Mayor of Kisielice	Local government
Maciej Sołtysik	Expert	Research organisation, REC, DSO
Wojciech Szymalski	Expert	Research organisation, REC
Zuzanna Sasiak	Polish Green Network	Research organisation
Małgorzata Mątowska	Think tank	Research organisation, REC
Ewa Dorskocz	Voivodship Fund for Environmental Protection and Water Management	RES Fund
Andrzej Mitura	Lesser Poland Voivodeship	Local government
Hanna Buczy	IEN energy	RES company
Anna Frączyk	ClientEarth	Lawyer
Rafał Krenz	Head of Hubcoop	Company, REC incubator
Szymon Liszka	Association of Energy Agencies	Energy advisor
Joanna Furmaga	Polish Green Network	Research organisation
Paweł Norberciak	Bison energy	RES company

The policy lab aimed, on the one hand, to discuss and validate the main barriers and enablers for the uptake of renewable energy communities. On the other hand, the policy lab offered an opportunity to stakeholders at regional and local level to discuss potential actions to support the development of RECs in Lesser Poland. The agenda of the policy lab is presented in the following table.

Table 13: Agenda of the policy lab

Time	Activity
11:30-11:45	1. Welcome: Anna Dyląg (KAPE)
11:45-12:00	2. Methodology for the development of regional action plans: Anna Dyląg (KAPE)
12:00-12:15	3. Current situation regarding RECs in Lesser Poland: Anna Dyląg (KAPE)
12:15-12:45	4. Barriers and enablers for the development of RECs: Anna Dyląg (KAPE)
12:45-13:30	5. Discussion about proposal for action plan for Lesser Poland (All)
13:30	6. Final summary and conclusion: Anna Dyląg (KAPE)

The **main tools and approaches** utilised for the development of the proposal for action plan for Lesser Poland include:

- Synthesis of relevant information on barriers and drivers for REC development in Poland.
- Review of good and best practices and the status of the enabling framework for RECs in Poland.
- Review of the outcomes from dedicated stakeholder consultations i.e., focus group interview in the frame of T2.3, the survey developed in T3.4.
- The discussion among the policy lab participants, moderated by Anna Dyląg of KAPE, was based on the barriers and drivers for REC development. Each barrier was discussed by the participants and several actions were proposed to remove/reduce the existing barriers.
- After the policy lab, KAPE synthesized the actions that were defined during the policy lab. The proposal for action plan was circulated for approval among the participants of the policy lab. The participants were given the opportunity to make additional comments and suggestions for improvement of the plan.

4.3.2. Barriers and enablers for REC development

As mentioned in the previous sections, the main barriers and enablers for the development of RECs in Lesser Poland that were identified during the COME RES project activities (in the frame of WP2 and WP3), were discussed with and validated by the stakeholders during the policy lab. Following barriers and enablers at the national level and the regional level (Lesser Poland) are considered most relevant.

Table 14: Main barriers for REC development

Barriers for REC development
<ul style="list-style-type: none"> ● Lack of clear/appropriate legislation for the renewable energy community, causing stagnation and delays in the establishment of energy communities. ● Lack of economic incentives and financial support discourages (especially) local government officials from engaging in the conceptual process of establishing RECs. ● Regulations that limit the ability of renewable energy communities to sell surplus energy to the grid. ● Regulations that limit the ability of renewable energy communities to share self-generated electricity (e.g., between members, neighbouring properties). ● Problems with DSOs that block the connection of competing energy cooperatives to the electricity grid. DSOs also fail to disclose the grid's connectivity, causing stagnation in energy investments. For Lesser Poland (in mountainous areas) in particular, a significant barrier is the lack of sufficient capacity of the electricity grids.

Table 15: Main enablers for REC development

Enablers for REC development
<ul style="list-style-type: none"> ● Regulations defining the right of energy cooperatives to become suppliers or producers selling surplus electricity to the grid. Currently, only energy clusters can sell energy in Poland, but they are not a legal entity and as such, do not comply with the definition of RECs set by REDII. ● Implementation of a legal definition of renewable energy communities. ● Pre-investment support instruments for energy clusters and energy cooperatives. These are foreseen to be implemented in the first quarter of 2023. ● Facilitating access of low-income and vulnerable households to participate in energy communities. ● Local governments initiating discussions on REC development and facilitating cooperation among relevant stakeholders, such as research institutions, the business sector, energy companies, etc.

4.3.3. Proposal for action plan to support REC development

The following table gives an overview of the 6 actions defined for development of RECs in Lesser Poland. The actions are clearly described, key actors are identified and priorities between the different actions are set.

Table 16: Overview of actions, key actors and priorities

Action	Description	Key actor(s)	Priority
Action 1: establishment of an energy community incubator.	Incubators will allow you to select and test investment plans and calculate the profitability of investments to be made in a REC.	<ul style="list-style-type: none"> ● <i>HubCoop</i> 	<i>Medium</i>
Action 2: public inventory of power grids to identify potential for grid connection for RECs.	Due to the difficulties in obtaining data from the DSO on grid connection possibilities, there are installations built that have not been connected. To avoid this, a public inventory could be made to identify the potential for grid connection for RECs..	<ul style="list-style-type: none"> ● <i>DSO</i> ● <i>KAPE</i> 	<i>High</i>
Action 3: access for local governments to information about grid connectivity on their territory.	Local governments should have more and easier access to data on grid connection possibilities on their territory.	<ul style="list-style-type: none"> ● <i>URE (Energy Regulatory Office)</i> ● <i>PSE (Polish Power Grids)</i> ● <i>Ministry of Climate and Environment</i> 	<i>Medium</i>

<p>Action 4: tax exemptions for the installation of renewable energy communities.</p>	<p>Economic incentives for RECs will stimulate investments in community energy projects.</p>	<ul style="list-style-type: none"> ● <i>Tax Ministry</i> 	<p><i>High</i></p>
<p>Action 5: simplifying administrative procedures for self-consumption projects.</p>	<p>By increasing the legislative power/competencies of local governments on energy related issues, administrative burdens for RECs and waiting times for license approvals can be reduced.</p>	<ul style="list-style-type: none"> ● <i>Ministry of Climate and Environment</i> 	<p><i>Low</i></p>
<p>Action 6: sufficient level of education in professions related to the energy transition.</p>	<p>Sufficient level of education for actors that take part in the energy transition (e.g., RES installation contractors) is crucial for efficient implementation.</p>	<ul style="list-style-type: none"> ● <i>Ministry of Education and Science</i> ● <i>KAPE</i> 	<p><i>Medium</i></p>

4.3.4. Next steps

Once the draft proposal for action plan is validated by the stakeholders in Lesser Poland, it will be **disseminated** by KAPE. The proposal for action plan will be shared with all members of the Polish country desk, and published on the COME RES website. The stakeholders involved in drafting the proposal for action plan will be encouraged to promote the action plan within their networks. Until the end of the COME RES project, KAPE will **follow up** the **implementation** of the actions and provide support where needed.

4.4. Target region: Apulia Region (Italy)

4.4.1. Process for drafting action plans

On the **10th of October 2022** a **first meeting with a core group of stakeholders** took place in the municipality of Roseto Valfortore, located in the Apulia Region. The meeting was organised back-to-back with the 2nd transfer workshop (in frame of T6.3) that focused on the REC of Roseto Valfortore, a pilot case in the Apulia learning region. During the meeting, a first discussion on the barriers and enablers for development of RECs and possible actions to overcome these barriers took place. The core group of stakeholders also discussed the organisation of a regional event (policy lab) involving both the Mayors of the inland area of the Apulia Region and the Regional Councillors working on energy and environmental issues. During the meeting it became clear that municipalities and the Apulia Region need to work together to revise spatial planning documents and the constraints placed on the installation of photovoltaic panels on the territory. The participants emphasised that the concept of RECs and the benefits for the region should be presented in a concrete manner to the regional government, with real energy data to provide evidence of tangible results and benefits of RECs. The draft proposal for action plan that resulted from this first meeting aimed at transferring the successful REC-model of Roseto Valfortore to other, suitable sites in the Apulia Region, by stimulating and promoting the REC model across the municipalities in the Apulia Region, by showcasing the good practice and sharing lessons learned, by engaging municipalities in the Apulia Region to cooperate on the development of RECs and by enabling the development of RECs through multi-service platforms and guidelines.

On the 30th of November 2022, a **national event “Urban Transition Pathways”** was organised in Bergamo City, involving the stakeholders of the Italian country desk. During this event the results of the COME RES transfer workshop and the transfer roadmap of the REC of Roseto Valfortore (in the frame of WP6) were presented as well as the draft proposal for action plan for the Apulia Region. The national event counted more than **200 participants from national, regional and local level**, including civil servants, representatives of ministries, members of universities, renewable energy companies, IT-companies, etc. Presentations were given by the Italian funding agencies, also involved in renewable energy communities, the Presidency of the Council of Ministers, national industrial sector federations, the National Association of Italian Municipalities, public research bodies and universities, representatives of the Climate-Neutral and Smart Cities Mission and the Horizon Europe Cluster 5 on Climate, Energy and Mobility. In addition to the COME RES project, also other Italian and European pilot projects on the topic of energy and energy communities in the regions of Lazio, Emilia Romagna, Piedmont and Sicily were presented, as well as projects on urban labs in Nordic cities.

Figure 9: Presentation of the COME RES project at the “Urban Transition Pathways” event



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The draft action plan was further discussed and approved in a **restricted policy lab on the 1st of December 2022**. The policy lab was attended by **14 participants** (see Table 17), including the Mayor of Roseto Valfortore, the Mayors from the Inland Area „Monti Dauni“, representatives of Italian funding agencies working on urban issues, civil servants from different Italian and foreign cities working on sustainable energy cities in different projects. Participation in the policy lab was restricted to have a focused and effective discussion amongst experts and practitioners in the field of RECs.

Table 17: List of participants of the policy lab

Organisation	Type of stakeholder
National delegates DUT P	National Funding Agency
“Monti Dauni”	Association of Municipalities in Apulia Region
Friendly power	SME - Energy service Provider
City of Parma	Local municipality
Municipality of Roseto	Local municipality
City of Braga	Portuguese municipality
Impresa e Sviluppo s.r.l.	SME - energy service provider
National Delegates Mission 100 CNC	National funding Agency
REC of Roseto Valfortore	Members of REC of Roseto

The **policy lab** was moderated by ENEA and consisted of **two main parts**. During the first part of the meeting, presentations were given in a plenary session to set the scene for the discussion of the proposal for action plan. The main results of the COME RES project were presented and the good practices from the REC of Roseto Valfortore (located in the Apulia Region) and the Renewable Energy Cooperative Ecopower (located in Belgium) were showcased. During the second part of the policy lab, the draft proposal for action plan was presented, discussed and approved. The agenda of the policy lab is presented in Table 18.

Table 18: Agenda of the policy lab

Time	Activity
11.30	1. Welcome – Lucilla Parisi (Sindaco Roseto Valfortore)
11.35 – 11.50	2. Progress of the COME RES project, results of the REC of Roseto Valfortore – Gilda Massa (ENEA, COME RES country desk coordinator)
11.50 – 12.10	3. Business model of REC of Roseto Valfortore – Vincenzo Raffa (Friendly Power)
12.10 – 12.25	4. Good practice: Ecopower (BE) – Virna Verneruci, (Ecoazioni, COME RES country desk)
12.25 – 12.45	5. Roadmap of Roseta and action plan – Gilda Massa (ENEA)
12.45	6. Conclusion – Gilda Massa (ENEA) & Virna Verneruci (Ecoazioni)

The **main tools and approaches** used for drafting a proposal for action plan for the Apulia Region include:

- Synthesis of relevant information on barriers and drivers for REC development in the Apulia Region (D2.3), lessons learned from good and best practices (D5.3) and the status of the enabling framework for RECs in Italy (D7.1).
- Review of the outcomes from dedicated stakeholder consultations (i.e., focus group interviews carried out in the framework of D2.3, the stakeholder consultation in T3.4, and previous thematic workshops and policy labs organised by the Italian country desk).
- Capturing the lessons learned from the transfer roadmap and business model of the REC of Roseto Valfortore, located in the Apulia region.
- Before presenting the draft proposal action plan, the COME RES project team (ENEA, Ecoazioni) wanted to clarify how they arrived at the draft proposal for action plan for the Apulia Region by highlighting some of the main results of the COME RES project. The presentations covered: the main conclusions and lessons learned from the Italian country desk meetings, the stakeholder consultations on the regulatory, organisational and technical aspects of RECs, the lessons learnt from the Belgian good practice Ecopower, the business model and transfer roadmap of the REC of Roseto Valfortore. Based on the information received from the project team, the participants were asked to evaluate and approve the draft proposal for action plan by means of a “tour de table”.

4.4.2. Barriers and enablers for REC development

The **barriers and enablers** for the development of RECs at national and regional level (Apulia Region) were discussed with and validated by stakeholders during different project related activities, such as the focus group interviews (in the frame of WP2), the country desk meetings and stakeholder consultations (in the frame of WP3), but also as a starting point for the discussion on potential actions for REC development in the Apulia Region, as mentioned in previous paragraphs. Following barriers and enablers at the national level and the regional level are considered most relevant.

Table 19: Main barriers for REC development

Barriers for REC development
<ul style="list-style-type: none"> ● Complexity of the authorisation processes and related timeframes. ● Lack of acceptance of RES projects in regions where large scale PV and/or wind plants have direct impact on the local environment.

Table 20: Main enablers for REC development

Enablers for REC development
<ul style="list-style-type: none"> ● Equal access to community energy for small municipalities, marginal areas and urban peripheries, also taking into account energy poverty. ● Provision of information, exchange of best practices, and dissemination of appropriate technical support tools ● Effective integration of financial instruments at national, regional and local level. ● Spatial integration of renewable energy sources to reduce the impact of RES on the local community and increase social acceptance, e.g. PV and solar thermal integrated in buildings, shelters, lighting systems, noise barriers.

4.4.3. Action plan to support REC development

The following table gives an overview of the 5 actions to enhance the development of RECs in the Apulia Region. The actions are clearly described, key actors are identified and timeframes are set. As explained in the previous sections, the proposal for action plan aims at transferring the successful REC-model of Roseto Valfortore to other, suitable sites in the Apulia Region, by stimulating and promoting the REC model across the municipalities in the Apulia Region, by showcasing the good practice and sharing lessons learned, by engaging municipalities in the Apulia Region to cooperate on the development of RECs and by enabling the development of RECs through multi-service platforms and guidelines.

Table 21: Overview of actions, key actors and time horizon

Action	Description	Key actor(s)	Priority
Action 1: regional workshop for dissemination of the REC model and engagement of stakeholders	A dissemination event will be held at the regional level in which a similar model as the REC of Roseto is proposed to the municipalities of the inland areas” Monti Dauni” (part of Apulia Region), highlighting the experience gained from the REC of Roseto, illustrating benefits of the REC model and promoting national bonuses.	<ul style="list-style-type: none"> ● <i>Municipality of Roseto Valfortore</i> ● <i>REC of Roseto Valfortore</i> ● <i>ENEA, Ecoazioni</i> ● <i>Local stakeholder (citizen’s association, SMEs based in the area, cooperative, religious bodies)</i> ● <i>Other Municipalities</i> ● <i>Regional governments</i> 	<i>High</i>
Action 2: workshop on REC business model (based on ECOPOWER experience)	A region-wide event will present the business model that Roseto Valfortore has implemented, also through the experience with the ECOPOWER model, and other municipalities will be invited to replicate this model, thanks also to the funds that the PNRR will make available for the creation of RECs.	<ul style="list-style-type: none"> ● <i>REC of Roseto Valfortore</i> ● <i>ENEA, Ecoazioni</i> ● <i>Business model expert</i> ● <i>Municipalities interested in REC creation</i> ● <i>Regional governments</i> 	<i>High</i>

<p>Action 3: MoU and strategic action plan</p>	<p>Signature of a memorandum of understanding between several municipalities and definition of a strategic action plan for the implementation of the REC model in Apulia that contributes to its replication in the region.</p>	<ul style="list-style-type: none"> ● <i>Municipalities involved in previous steps</i> ● <i>RECs</i> ● <i>Regional Department for Energy and Regional Department of Economic Development</i> 	<p><i>Medium</i></p>
<p>Action 4: multiservice platform for RECs</p>	<p>A multi-service platform for RECs with geolocation of RECs active and/or being activated in the territory will be set up. The tool will provide a REC assessment with a set of specific key performance indicators. The tool will also be used to develop a national scenario on RECs: how many, how they work, type and number of members, etc).</p>	<ul style="list-style-type: none"> ● <i>ENEA</i> ● <i>Regional governance</i> ● <i>RECs in Apulia</i> 	<p><i>Medium</i></p>
<p>Action 5: regional legal framework contribution</p>	<p>Discussion on contribution based on project experience to improve the guidelines on REC at Regional level</p>	<ul style="list-style-type: none"> ● <i>Municipalities involved in previous steps</i> ● <i>RECs</i> ● <i>Regional Department for Energy and Regional Department of Economic Development</i> 	<p><i>Medium</i></p>

4.4.4. Next steps

The proposal for an action plan will be **disseminated by ENEA and ECOAZIONI** among all members of the Italian country desk, and published on the COME RES project website. The members of the Italian country desk will also be encouraged to promote the action plan and make it visible through their own communication channels. The local and regional media will be contacted as soon as the REC of Roseto Valfortore is connected to the national grid to showcase the good practice.

In parallel, ENEA and ECOAZIONI will **follow up the process of implementation** of the high-priority actions until the end of the COME RES project in February 2023, providing support where needed. ENEA will follow up the REC development of Roseto, also after the project's lifetime, as part of ENEA's national activities related to REC community networks and support platform.

5. Main lessons learned and conclusions

5.1. Lessons learned about the process

In the different target regions, a similar process was followed to draft the proposals for action plans.

First, a meeting with a core group of stakeholders was organised to discuss the barriers and enablers for REC development in the region, to identify potential actions to overcome these barriers and to agree on the organisation of the policy lab.

Next, a policy lab was organised to present and discuss the proposal for action plan with a broader group of stakeholders. In most target regions, the meeting was organised back-to-back with a country desk meeting or another event to take advantage of the opportunity to reach as much stakeholders as possible. For the target regions that were also involved in the transfer activities (in the frame of WP6), the policy lab was organised after the actions were defined in the transfer roadmap (D6.3), so that the identified barriers for the development of RECs and some of the proposed actions could be integrated in the proposal for action plan. The participation in the policy labs was in most cases restricted to have a focused and effective discussion on the proposal for action plan. Participants were selected based on a set of criteria such as their knowledge of the context, practical expertise with RECs and role in the policy making process. As a result, the policy lab brought together stakeholders from the local, regional and national level with an interest in the development of RECs in the selected target region, such as policymakers, energy agencies, representatives of municipalities, RECs at different stages of development, environmental and research organisations.

For the organisation of the policy lab all COME RES partners started from the results and lessons learned from previous assessments done in the frame of the COME RES project, such as the assessment of the barriers and drivers for REC development (D2.3), the in-depth assessment of good and best practices (D5.3) and the assessment of the status of the enabling framework for RECs (D7.1). Moreover, the outcomes from the dedicated stakeholder consultations and meetings organised by the national country desks were reviewed and taken in to account when drafting the agenda for the policy lab. The experience and knowledge gathered from the different stakeholders confirmed the previously obtained results, providing a robust and comprehensive identification of the main barriers and enablers for REC development.

For most target regions, the COME RES project team carried out a synthesis and fine-tuning exercise of the actions proposed in the aftermath of the policy lab. The refined proposal for action plan was then circulated for approval by the stakeholders.

In all target regions the next steps mainly focus on the dissemination of the proposal for action plan among the members of the country desk and further promotion of the plan through their communication channels and networks. Until the end of the project, monitoring of and support with the implementation of the action plan is foreseen by the COME RES partners involved.

Following key lessons can be learned from the process of drafting a proposal for action plan in the four selected target regions:

- In order for the policy lab to run smoothly, is better not to start from scratch. In setting the agenda of the meeting it is advisable to establish links with the COME RES project activities and previous stakeholder consultations and dialogues.
- Explaining in detail the objectives and dynamics of the policy lab at the beginning of the meeting is key to the success of the discussion.
- A roundtable format, accompanied by a template or matrix projected on a screen and filled in real time, provides clear guidance to the participants during the discussion, avoiding scattered interventions and favouring discussion on the issues mentioned as they are reflected and presented on the screen.
- A robust identification of the main barriers and drivers is key for the drafting process. The diversity of actors involved in the process makes it possible to identify unique barriers and issues, and to propose detailed solutions, incorporating the point of view of the different stakeholders.
- Bringing together experienced people who are already familiar with the issues at hand provides great value and facilitates the identification of actions.
- It was useful to take advantage of the synergies with the transfer roadmap (in the frame of D6.3) and to have valuable input from the mentoring regions, incorporating lessons learned and good practices.
- The engagement of a large group of stakeholders in a meeting is challenging, especially when a strong and active participation is desired. The request for written feedback on the proposal for action plan, in the format of public consultation, could be more effective.

5.2. Conclusions about the actions plans

Each of the selected target regions drafted a proposal for action plan for the development of RECs in their respective target region. In total, **30 actions were identified** of which 18 actions (64%) involve more than one actor and 21 actions (70%) have a medium to high priority. Although the plans differ in the number of actions defined, the level of detail in which the actions are described and key actors are identified, some general conclusions can be drawn.

The level of detail and ambition of the proposed actions varies: some actions are very specific and concrete, while others, of a broader and more ambitious nature, have to be further discussed with the key stakeholders in the target region and further elaborated. Some actions signal the need for more events and discussions, rather than suggesting concrete policy changes that can effectively enhance the development of RECs. Also, the key actors are often described by appointing the type of actor or organisation without specifying e.g., the responsible department, team or function. The more specific the identification of key actors and their responsibilities, the higher the level of engagement will be in following up and implementing the actions.

A significant amount of the proposed actions involves more than one actor: the engagement of several actors in the implementation of a specific action requires additional coordination efforts between the parties involved and/or the creation of appropriate collaboration mechanisms, such as dedicated working groups or task forces. This will have to be taken into account in the implementation of the action.

In several actions, municipalities are identified as a key actor confirming their role as enablers but also as main beneficiaries of RECs.

Several of the proposed actions directly address the "traditional" operators of the electricity system, such as large energy traders and distributors. However, due to the difficulties encountered in involving these actors in previous discussions, there is a high degree of uncertainty about the subsequent implementation of the proposed actions. Actions that have an impact on the existing power relationships (e.g. increase in competencies of local governments on energy related issues), will most likely meet more resistance.

The **actions in which the COME RES project partners are involved** (i.e. Ecorys and ACER) will most likely have a smoother implementation as the partners will be involved in the follow-up of the actions during the project's lifetime. Concrete time frames for the implementation of the actions, based on the qualitative (priority) ranking, and clear identification of key actors and responsibilities, can facilitate the follow-up of the actions and smoothen the implementation process, also after the project's lifetime.

Regarding the **content of the proposals for action plans**, and taking into account contextual specificities in each of the selected target regions, the following common thematic fields for the elaboration of specific actions emerged:

- **Dissemination of knowledge and capacity building:** it appears that many key actors in the development of RECs (especially public officials at the local level) still lack essential information about the potential contribution of RECs to the (local) energy transition as well as the capacities

to facilitate the formation, preparation, implementation or operationalisation of RECs. Actions to address this barrier aim to facilitate the access to information and provision of tailored advice during the different stages of REC development and implementation. The actions identified include e.g., the organisation of training sessions for local officials, the establishment of one-stop shops, dissemination of best practices and business models.

- **Administrative burdens:** burdensome and lengthy registration and licensing processes, but also administrative burdens associated with the design and operation of RECs, remain a main barrier for many RECs, especially since many of them rely on volunteers. Actions to address this barrier include administrative simplification (especially for the small-scale projects that RECs often engage in), information sessions with licensing authorities to clarify the eligibility and scope of action of RECs, or taking matters entirely out of the hands of the REC by providing technical assistance for license application, business models, financial modalities, technical planning and implementation, etc.
- **Interaction with the DSO:** transparency on the connectivity and capacity of the grid appears to be necessary for the development of RECs in terms of providing suitable connection points to the local grid and setting up frameworks for self-consumption. Proposed actions aim to identify suitable connection points to the local grid and setting up frameworks for self-consumption.
- **Untapping the RES potential:** the assessment of the potential for RECs in the target regions (in frame of D2.2) made apparent that there is a significant potential for solar and wind available. RECs can be seen as an instrument to untap this potential. Actions proposed include a legislative framework for agri-photovoltaic and empowerment of industrial RECs.
- **Citizen participation:** in regions where large scale RES have a direct impact on the local environment, citizens are more reluctant to participate in RECs. Moreover, the lack of a cooperative/associative culture or lack of awareness about the (economic) benefits of RECs create a barrier for citizens to engage in RECs. Actions to increase citizen participation include information campaigns on the benefits that can be realised by participating in a REC, workshops on the concept of RECs, showcasing good practices or successful pilot projects.

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