



**Advancing Renewable
Energy Communities**

Deliverable 6.3

FOUR BEST PRACTICE TRANSFER ROADMAPS FOR LEARNING REGIONS

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SUMMARY

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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

In COME-RES' broader objective of supporting the development of renewable energy communities (RECs) in nine European countries, one activity is the facilitation of so-called 'transfer activities' where teams from mentoring regions are coupled to learning regions to share experiences and knowledge. The following pairs have been composed: Thuringia (Germany) / North Brabant (the Netherlands), Apulia (Italy) / Flanders (Belgium), Latvia / Piedmont (Italy), Canary Islands (Spain) / Comunidad Valenciana (Spain). In the activities of COME-RES prior to this report, stakeholders from learning regions have visited the mentoring regions with the purpose of studying a single best practice for community energy. This report describes the activities in the context of a return visit of practitioners of the mentoring region to the learning region. The key purpose of this return activity was to draw up a roadmap which describes tangible steps towards implementing (aspects of) the best practice in the learning region.

After an introduction, this report starts with describing the so-called 'Dynamic learning lab methodology' which acted as a basis for the transfer teams to compile a roadmap. The results section describes the activities undertaken in the return visits and the resulting roadmaps. A final conclusion section takes stock of more generic lessons learnt from the four transfer workshops. One main lesson is under which conditions a transfer of concepts is possible and how it demands a great amount of 'translation' between different national contexts. Another finding is how difficult it is to demand and achieve a deeper type of reflection as asked for within the 'Dynamic learning lab methodology'. In this light, this report recommends to keep methodologies for roadmaps more adaptable to the specific situation at hand.

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1. Aim and Background

One of the aims of the COME RES project is to support the development of new Renewable Energy Communities (RECs), by encouraging context-based best practice transfers. This Deliverable describes the processes of the COME RES best practice transfers from regions that generated best practices of renewable energy communities (RECs) to learning regions where the concept /RECs are not well-developed within the partner countries. To this end, four learning regions were coupled to four mentoring transfer regions deemed to be of particular relevance for a particular learning region. For each of these pairs a transfer team was identified and composed of participants from the learning region, the transfer region, and mentoring experts from the COME-RES consortium. A first step in this process (WP 6.1 - Transfer management plans for learning regions¹) was the formation of the following learning / transfer region pairs:

- Thuringia (Germany) / North Brabant (the Netherlands)
- Apulia (Italy) / Flanders (Belgium)
- Latvia / Piedmont (Italy)
- Canary Islands (Spain) / Comunidad Valenciana (Spain)

A second step (D6.2, “Four capacity development and transfer workshops reports”²) consisted of taking several best practices identified in other work packages of COME-RES (primarily D5.3 “Synthesis Report based on in-depth assessment of 10 transferable best practices”³) and organizing a visit from the learning region to the mentoring region where these best practices were explored with participants from both regions. These discussions led to the formulation of a concrete set of recommendations for each of the learning regions.

This report starts from the preliminary recommendations developed as a result of the capacity building and training that took place under Task 6.2 for each of the transfer cases. For each case, the set of recommendations is transformed into a detailed transfer roadmap for each of the learning relations.. These transfer roadmaps are formulated as dynamic learning agendas for the regions involved (cf. Section 2). At least three of these roadmaps will be supported by a ‘Memorandum of Understanding’ (Annex 5.5) signed by stakeholders representing the mentoring and learning region. The development of these roadmaps was supported by max. two transfer workshops per case, using a ‘learning lab’ methodology. The following section introduces this learning lab methodology before discussing the application of the methodology in the different transfer cases.

¹ A. Zučika et al. (2022), COME-RES D6.1 Transfer management plans for learning regions, <https://come-res.eu/resource?uid=1292>

² M. Bastiani et al. (2022), COME-RES D6.2 Four capacity development and transfer workshops reports, <https://come-res.eu/resource?uid=1359>

³ P. Maleki-Dizaji, F. Rueda, et al. D5.3 Synthesis Report based on in-depth assessment of 10 transferable best practices, <https://come-res.eu/resource?uid=1308>

2. Dynamic Learning Lab Methodology

2.1. Background

The methodology developed for the COME RES transfer activities is based on an adaptation of the 'dynamic learning agenda' methodology developed by researchers from the Dutch universities of Wageningen and Amsterdam⁴. This methodology has specifically been developed for system innovation projects. System innovation projects are projects that aim for innovations in several linked domains (technological, economic, social, legal, institutional, cultural) in order to generate positive sustainability impacts on a system level over a longer timeframe. The dynamic learning agenda methodology seems particularly relevant for the purposes of the COME RES project, since the COME RES best practice transfers aim to support the development of RECs in the learning regions through capacity development for regional / local authorities and community stakeholders through a transfer of best practice elements that have proven their value in accelerating particular REC projects or dynamics in other countries/regions.

The dynamic learning agenda methodology starts from the observation that system innovation projects often go against the grain of the established way of doing things. As such, they often face considerable resistance. A process of stepwise 'learning by doing' is needed, because the existing system cannot just be replaced in all of its relevant elements in one single stroke. This means that particular features of the system innovation have to be tried out in a piecemeal fashion, and the adaptive capacity of the relevant institutional, technological, or cultural system parameters has to be carefully monitored. Managers of system innovation projects therefore face a very specific set of challenges:

1. The results of project interventions cannot be defined beforehand. They arise over the course of project implementation from all kinds of (partially) unforeseeable interactions with existing system elements. In the absence of clear-cut cause-effect relationships, project results will be 'emergent'. Project implementation is therefore not about implementing measures and monitoring whether they are 'on target' (i.e., able to achieve predefined goals), but above all about going through repeated circles of planning, implementing, observing, reflecting, and shaping necessary interventions.
2. The definition of the relevant problems to address or questions to be answered will change in constant interaction with project actors, external stakeholders and external factors. This demands a great deal of flexibility from the project managers involved. It is therefore impossible and even counterproductive to implement traditional planning approaches, aiming at a clear definition of quantitative targets and deadlines.
3. However, in all of this the project manager has to keep in mind the relevant long-term goals that have to be achieved. There needs to be a constant reflection about the relevance of

⁴ BC. van Mierlo et al. (2010). Reflexive Monitoring in Action. A guide for monitoring system innovation impacts. WUR/Athena Institute (VU). <https://www.wur.nl/en/Publication-details.htm?publicationId=publication-way-333935373332>

proposed actions for achieving the long-term goals, even if this means that certain actions have to be postponed or redefined.

The COME RES transfer roadmaps therefore take the form of a dynamic learning agenda, i.e., they specify which questions need to be answered by when in order to create impact, without specifying in clear quantitative terms what this impact will or should be (this is made impossible because of the emergent nature of system interactions). In other words, the transfer roadmaps can only be seen as provisional, as the importance of the subjects covered in these roadmaps will certainly change over the course of implementation. The roadmaps developed in this deliverable can therefore only be seen as the first step in an iterative process. They give direction, but do not prescribe the destination.

For the purposes of the COME-RES best practice transfer process, the original dynamic learning lab methodology has been slightly adapted. The primary reason for adapting the original approach is that the COME-RES consortium can only play a role in the initialisation of transfer projects, while any follow-up steps exceed the project duration of COME-RES. Put differently, COME-RES cannot play a role in facilitating the formulation of the dynamic learning agendas at later stages of the projects (i.e. $t + 1$, $t + 2$ in Fig. 2). It can only present an agenda at a single point in time.

The adapted version of the dynamic learning lab methodology consists of going through the reflexive three-step exercise outlined below as to capture how the dynamic learning lab methodology seeks to foster thinking on the systemic level. Then, to stimulate that the actionable questions are in fact carried out by the relevant stakeholders, a follow up step consists of making a short-term planning which describes which actions are undertaken in specific timespans.

2.2. Approach

A typical challenge for project managers during the implementation phase of an innovative project is to keep both the long-term goals related to system change and the concrete short-term action perspectives in view. Experience has shown that some system innovation projects easily 'get stuck' in identifying problems or barriers to the innovation, so that concrete perspectives for action are lost from sight. The opposite also happens: i.e., the project team puts a lot of time and energy into defining and implementing concrete activities without reflecting on the contribution that these make to system change, i.e., the long-term ambition of the project. The dynamic learning lab methodology is a tool that helps system innovation projects to link long-term goals to concrete action perspectives, by formulating the challenges that arise, and keeping them up to date. The dynamic learning agenda encourages people to keep working on change.

The outcome of the learning lab, i.e., the dynamic learning agenda, is a short document containing the challenges that the project (in our case, the transfer of best practices) is facing at that particular moment in time. These challenges are expressed in the form of questions that indicate the need for learning. In addition, it is a tool for supporting and initiating the discussion about the challenges the project is facing. The agenda is dynamic because it will be adjusted as the transfer of best practices evolves. As soon as a challenge is no longer relevant, the associated learning question disappears from the agenda. Fig. 2 gives a graphical representation of how the dynamic learning agenda changes over time. It can also be

the case that during the course of the process questions need to be formulated differently, or new questions need to be added (e.g., questions E, F, G in Fig. 2). Questions that remain on the agenda for a longer period of time are likely to represent persistent problems.

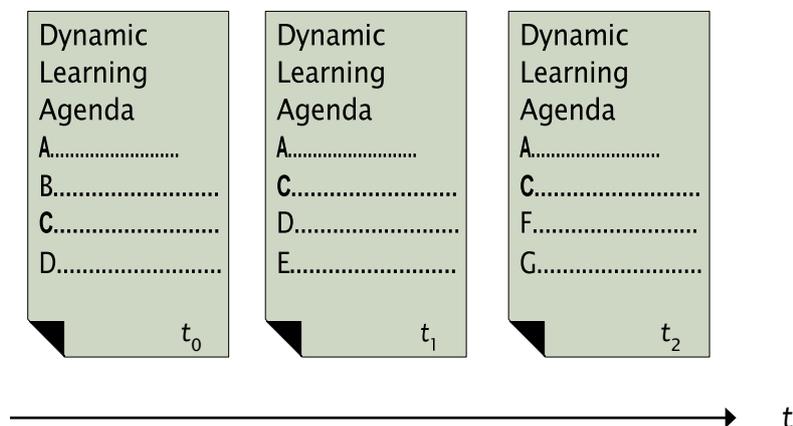


Figure 1: Schematic Representation of a Dynamic Learning Agenda

The concrete formulation of a dynamic learning agenda for the COME RES learning regions is the outcome of a stepwise procedure. In what follows, we presume that the different members of the learning region and target region teams form a group that collectively thinks through the detailed steps, called the ‘learning lab’. In this process, one of the experts from the mentoring team takes up the role of the moderator/facilitator, while another takes care of reporting.

2.2.1. Step 1: Reformulate Recommendations from Learning Workshop into Questions for Systemic Innovation

The first step starts from the concrete recommendations formulated at the end of the training workshops under Task 6.2 (cf. D 6.2). These preliminary recommendations represent aspects that the members of the learning region consider to be particularly relevant in the transfer of the best practice elements from the transfer region. In a first step, the learning lab looks at each of the recommendations in turn, and tries to reformulate them as questions that need to be answered in view of achieving a sustainability impact on the overall energy system. Practically, this means that for each recommendation, the following questions should be addressed in turn:

- Why is it important to address this recommendation? (What do you want to achieve when following up on this recommendation?)
- What are your assumptions that underpin the importance of this recommendation?
- What do you know for sure, and what are the remaining uncertainties in these assumptions?

To achieve the required output for this first step – i.e., a reformulation of the recommendations into questions that form the basis of the dynamic learning agenda – it is important that the facilitator probes deep enough, and explicitly challenges the assumptions of the participants in the learning lab in order to surface the uncertainties that form the basis of the questions for learning. The following box gives a hypothetical example of such a process of questioning.

Table 1: Template for Reformulating Recommendations into Questions for Systemic Innovation

Recommendation	Question for systemic innovation
e.g. Municipalities should benefit financially through a cooperation with local energy cooperatives or other community energy initiatives	e.g. What motivates municipalities to cooperate with local community energy initiatives?

An illustration of Step 1 of the learning lab methodology

An exemplary recommendation states that „Municipalities should benefit financially through a cooperation with local energy cooperatives or other community energy initiatives“.

As a starting point for reflection, the facilitator first inquires about the importance of this recommendation. Why is it important for local community energy initiatives to cooperate with municipalities? What can municipalities do for them that other actors cannot?

Secondly, the facilitator can further probe into the need for financial benefits. This clearly represents an assumption on what motivates municipalities to work together with local energy initiatives, but exactly how sure are we about this assumption? What could be other motivations for collaboration? Do we have examples of collaborations that are not based on financial benefits? What do these examples tell us about the strength of other motivators?

Thirdly, upon listening carefully to all arguments, questions, remarks and objections that are raised by discussing the previous questions, the learning lab members guided by the facilitator should come to an agreement on a joint statement about the overall importance of the recommendation for the learning region based on what is known with (relative) certainty, and of the remaining questions (based on the uncertainties revealed during the discussion) regarding that recommendation. For instance, the group could come to the conclusion that municipalities are indeed key partners for energy community initiatives to flourish, but that they actually do not have a good understanding of what motivates municipalities to cooperate with local energy communities. Hence, they formulate the following question as input for the dynamic learning agenda: „What motivates municipalities to cooperate with local community energy initiatives?“

2.2.2. Step 2: Categorise and Prioritise Questions

In step 2, the outcomes of step 1 (i.e., the list of questions derived from the set of recommendations) are first systematically categorised into one of the five categories listed below that they mainly refer to:

- a. governance structures including gaps in the national transposition of the EU directives,
- b. legal forms,
- c. activities in the energy market and business models,
- d. cooperation models and financial participation possibilities for local authorities in RECs,
- e. other.

It could also be the case that the question is relevant for several of these categories; in that case, the facilitator should try to split original question into more precise questions that more clearly fit into one of the categories.

Next, for each of the remaining questions, the learning lab group should decide on the priority of the question, i.e., on the relative urgency of having an answer to the question in view of reaching the overall goal of having a systemic impact. Depending on the context, priorities can be indicated in a precise way (e.g., “we need an answer within 5 months”) or in a more indicative way (e.g., by making a global distinction between “short”, “mid” and “long”-term). The result of step 2 were reported in a matrix format (see Table 2).

Table 2: Template of Matrix Categorisation of Questions

Category	Questions	Priority (in time)
Governance structures	<ul style="list-style-type: none"> • Question 1 • Question 2 • ... 	<ul style="list-style-type: none"> • Short- / mid- / long-term • 5 months / 1 year / 5 years • ...
Legal forms		
Activities in energy market/business models		
Cooperation models		
Other		

2.2.3. Step 3: Formulate List of Actionable Questions

Based on the outcomes of previous discussions, this step aims to generate an overview of questions to be addressed in the short term (i.e., the most urgent questions identified in the matrix) and an overview of stakeholders that could support the learning region in finding answers to the questions (and ideally also in implementing the answers to the questions). The other questions (with relevance on the mid- to longer term) of course are not simply discarded, but they are kept on the learning agenda and can possibly be activated in the next iteration(s) of the dynamic learning process.

The priority questions form the basis of the dynamic learning agenda that should help the partners from the learning region to accelerate the growth of energy community initiatives in their region. Therefore, it is important that the final list of questions are formulated in such a way that they lead to clearly defined actions, and a clear identification of the responsible parties that should take the lead in answering these questions. To this end, the facilitator should start from the list of priority questions identified in step 2, and ask the following questions in turn:

- Why is it so important to answer this particular question in the short term? (this question can still further help the learning lab participants to weed out the questions that on second thought can be left aside for the moment)
- What and who is needed to find an answer to this question?
- Who will start addressing this question? When and how?

The results of this step were recorded in a matrix (see Table 3).

Table 3: Template of Matrix of Actionable Questions

Questions	Why is this important?	Who and what is needed to find an answer?	Who will take action?
Question 1			
Question X			

2.2.4. Step 4: Transform Actionable Question into a Short-Term Planning Roadmap

In order to come to a more concrete overview of what needs to be done at which specific time on the short term, the final step consists of making a more concrete short-term planning of actions to undertake.

Table 4 provides an example of such a transformation list.

Table 4: Template for Short-Term Planning of Actions to Undertake

Month	Action to undertake
Nov. 2022	e.g., 'Stakeholder XX investigates availability of government support schemes for business model XX'
Dec. 2022	e.g., 'first tentative calculation of potential business model'
Jan. 2023	
Feb. 2023	

The short-term planning can be seen as the first version of the dynamic learning agenda for the learning region in question. The first version can form the basis of a 'Memorandum of Understanding', signed by both the representatives of the learning region, as well as the stakeholders that were identified as being the crucial partners in finding answers to the priority questions.

3. Results of Transfer Workshops

3.1. Germany-Netherlands Transfer

3.1.1. Transfer Concept

The German case focused on the transfer of the Energy Gardens from the Netherlands. In June 2022 representatives from the COME RES target region Thuringia and of the Transfer Team travelled to the provinces of Noord-Brabant and Gelderland, the Netherlands, to visit and learn from three Dutch best practice energy communities, which had been pre-selected as suitable in terms of successful transferability to Thuringia. The group visited the 'Energy Garden', the citizen wind farm 'de Spinder' and the community virtual power plant in Loenen. Following the presentation and discussion of the three cases, the German stakeholders considered the Energy Gardens concept as the one offering most transferable elements for the Thuringian context and decided to deepen their understanding of the concept and discuss how to adapt the concept according to the Thuringian context in a second visit ('return visit'). In the Netherlands there are several Energy Gardens that differ from each other with respect to surface area, solar field, power generation capacity but also the percentage dedicated to societal functions. The Thuringian Transfer Team opted for the Energy Garden De Langenberg that is being implemented on a former waste disposal site. The municipality of Bronckhorst already had plans to install a solar park in De Langenberg. The design and construction of the Energy Garden is taking place in cooperation with the surrounding municipalities and a local energy cooperative.

This best practice consists of establishing multifunctional and biodiverse energy parks for and with the local community which offer both recreational and educational services. The parks are administered by a managing foundation in which RES technologies developer, the Dutch Nature and Environmental Federation and the local community are represented. The Energy Garden De Langenberg will stretch over an area of 15 hectares, but most of that area will not be specifically used for solar energy. The number of solar panels is still being determined in consultation with residents and other stakeholders. The concept of this Energy Garden is based on a multifunctional site where the generation of sustainable energy goes hand in hand with nature and recreation. Local citizens and stakeholders are directly involved in the project's design from the start and try to consider local characteristics (landscape, cultural-historical values) and to create and maintain the projects, which are co-owned by the local communities. These pilot projects show that social acceptance can be generated. The best practice possesses model character especially concerning the provision of social, biodiversity and community benefits as well as concerning participation procedures. A large portion of its elements can be transferred with minor adjustments to other contexts and also Thuringia. Especially the procedural elements and participation methods, e.g. mapping out values, are highly transferrable.

The Energy Garden itself adds value to the community, since it is open to the public, offers recreational and educational activities, is a place for recreation and is embedded ecologically and within the landscape. By involving volunteer groups in management and maintenance, the Energy Garden is co-owned by the community. Additionally, local nature and environmental associations for maintenance

and monitoring of biodiversity are involved as stakeholders as their expertise provides helpful insights for the Energy Garden's relation with its surrounding landscape.

During the workshops the Dutch experts gave insights into how an Energy Garden can be implemented against the background of a societally, environmentally and economically integrated concept. The German stakeholders discussed about the economic viability and the possibilities how the Thuringian Ministry for the Environment, Energy and Nature Conservation can partake in this process, to enable local (independent) empowerment of municipalities who want to implement an Energy Garden in Thuringia.

3.1.2. Transfer Team

After a first visit to the Netherlands by the German stakeholders, the second transfer visit took place on the 14th of October at the office of ThEGA (Thuringian Energy Agency) in Erfurt. The workshop's aim was to discuss with the initiators and managers of two Energy Gardens, including the case of the multifunctional solar park De Kwekerij, which can be regarded as a pioneer in terms of multifunctional solar farms and evaluate important lessons for the German stakeholders. The German stakeholders were given the chance to interact with the Dutch experts and later on developed ideas on how to transfer the concept of the Energy Gardens to the federal state of Thuringia (including a concrete road map for the upcoming months). The Transfer Team which was larger than the group that participated in the first site visit in the Netherland was enriched by the participation of the managing director and the chair of the Foundation Board of the Landscape Park Nohra in Thuringia, a project that has similarities with some Energy Gardens. They shared their experience, especially regarding their business model, integration of locals and municipalities as well as ecological measurements. Table 5 gives an overview of the individuals that participated in the workshop. The actors came from different sectors, such as politics, research, and cooperatives.

Prior to the transfer workshop, following the 'dynamic learning lab methodology', the German mentoring team carried out a virtual meeting to develop questions for the workshop and categorise them according to their priority and timeframe. A first set of questions was formulated based on the recommendations from previous work, such as D6.2 "Four capacity development and transfer workshops reports"⁵ and the results of the first transfer visit. This draft was sent to the Thuringian stakeholders for feedback. During the transfer workshop the Dutch experts gave an online presentation, followed by a brief Q&A. After a short break, the meeting continued offline, where three of the German mentoring experts by using the learning lab methodology discussed key issues with the participants. At the end of the afternoon, the results of the discussions were presented to the Dutch experts for feedback⁶

⁵ M. Bastiani et al. (2022), COME-RES D6.2 Four capacity development and transfer workshops reports, <https://come-res.eu/resource?uid=1359>

⁶ The agenda of the workshop can be found in the Annex.

Table 5: Participants of the Second Transfer Workshop in Erfurt

COME RES consortium members	Stakeholder in learning region	Mentoring experts from consortium and country of origin
<ul style="list-style-type: none"> • FUB Maria Rosaria Di Nucci, Michael Krug, Lucas Schwarz, Vincenzo Gatta • BBH Dörte Fouquet 	<ul style="list-style-type: none"> • Thuringian Energy and GreenTech Agency (ThEGA) Ramona Roth, Marcel Weiland, Thomas Platzek, Frank Schindler, Dieter Sell • BürgerEnergie Thüringen e.V. Reinhard Guthke, Marcel Schwalbach • Citizens' Energy Alliance (Bündnis Bürgerenergie, BBEn) Malte Zieher • Thuringian Ministry for the Environment, Energy and Nature Conservation Antje Kießwetter • Friends of the Earth BUND e.V. Thuringia Bastian Stein, Sebastian König • Climate Protection Foundation Jena Matthias Stüwe • Energy cooperative Ilmtal Matthias Golle • Foundation Landscape Park Nohra (Stiftung Landschaftspark Nohra) René Kästner und Andreas Schiller 	<ul style="list-style-type: none"> • COME-RES Partners from TU/e Rien de Bont • NGO NMF Alex de Meijer • Sunwatt B.V. Willem de Lint



Figure 2: Transfer Team at the Workshop in Erfurt

Source: Frank Schindler (ThEGA)

3.1.3. Overview of Discussions Dynamic Learning Lab

As a first step within the ‘dynamic learning lab’ recommendations and questions for systemic innovation regarding the transfer case of the Energy Gardens as elaborated in D6.2 “Four capacity development and transfer workshops reports” were presented and endorsed by the participants of the German transfer activities⁷. In a short review round, questions were finalised together and prepared for the transfer workshop. The recommendations from D6.2 relate to the economic viability of the project, business model and ownership, as well as technological choice and involved actors.

Economic viability represents a basic prerequisite of any project. Therefore, it is advisable for any Energy Garden project in Thuringia to be designed according to the economic viability, especially regarding the size. Although Thuringia is a comparatively sparsely populated federal state, spatial ownership is already contested. Specific conditions enabling Energy Sharing are not yet set in German law and regulations and such regulations are not foreseen to be implemented within the EEG 2023 amendment. Against this background factors such as the optimal spatial scale of the project in Thuringia will be relevant to enable economic viability without having to rely on Energy Sharing. Another aspect that determines the economic viability of the project is the combination of actors involved in the initial and operational phase of the project. The combination of actors/stakeholders requires consideration as the project needs to balance different interests in order to be successful. Such issues require consideration as the involved stakeholders play a major role in an Energy Garden, due to the inclusive and participatory character of such a project. This affects efficient decision making and the capability to implement ideas. Are citizen groups the only engine of a bottom-up dynamic or can a municipality fulfil this function as well? In particular it is important to clarify which actors need to be involved in which phase of the project, which actors can create synergy effects towards the community or municipality. Issues such as how educational aspects of the Energy Garden can be fulfilled.

As Germany and the Netherlands have different institutional settings and legal constraints, it is also necessary to evaluate which aspects can be transferred directly and which need to be adapted and how. The Dutch case has shown that an Energy Garden can succeed if local stakeholders (e.g. municipalities, mayors, etc.) and residents take the initiative. Authorities can only assist this development by providing information and support to citizens. A merely top-down approach can be counterproductive. The questions of which forms of dialogue are necessary to successfully involve aforementioned actors in the initial phase of the project and how can their participation be carried out needs to be addressed. In the operational phase educational offers could be implemented. Depending on the target group, for example, primary schools, but also secondary schools and (if applicable) universities could play a role to provide education on biology, sustainability, energy production, local ecology or consumption.

During the initial phase, questions regarding the business model and ownership arise. Regarding the business model it is advisable to pursue two different kinds of financial backing, one for planning and initiating the process (initial phase) and one for the land purchase, installation of the RES technology and ecological measures (operational phase), see D6.2. The stakeholders of the project will need to find

⁷ The summarising table (Recommendations & questions for systemic innovation of the transfer) can be found in the Annex.

answers for questions of the required amount of investments and which sources are available to cover those costs. As questions of financing are relevant in both, the initial and operational phase of the project, it might be necessary to think about constant acquisition of new members to cover operational costs. Another recommendation is that there could be advantages in splitting the 'social' (e.g. participation) and the 'commercial' (RES infrastructure) part of the project. This should also involve separate funding. The question arises how the participatory process can be carried out to be meaningful, honest and at the same time without counteracting the economic viability of the project.

The business model of an Energy Garden is directly linked to its ownership. Bastiani et al. (2022)⁸ recommend that a suitable site should preferably be owned by a municipality and be a degraded or contaminated site. As for any project, the question of the availability of a suitable site and how this site can be best integrated into local land use concept is at the core of the Energy Garden. The main focus of actors should stay at the municipal level. The following questions require consideration: How can local customers be acquired? Are there other ways to tap into local structures and exploit synergies to promote the project and acquire customers? Usually NGOs and/or municipal actors are perceived as trustworthy and their direct involvement can help enhancing the acceptability of the project. So, in turn: Who are suitable actors to implement Energy Gardens in Thuringia? Can the experiences from the Netherlands properly be transferred to Thuringia? How can local NGOs, such as Friends of the Earth, come into play?

A last open question revolves around the type of RES technology. In the Netherlands, ground-mounted PV panels are the dominant technology in the Energy Gardens. Thuringia could also try to embed (medium-sized) wind turbines in such projects or even biogas plants (e.g. using residues from landscape management or energy grasses) to showcase the different possibilities of RES technologies. This approach is especially suitable for Energy Gardens with an educational focus. In terms of total energy production, PV might remain the dominant form of energy production. The last question is therefore, which RES technology can be used in addition to PV as well as whether this is even feasible.

During the workshop, the participants ranked the importance of questions that need to be answered and the priority of each question. The questions were split up into questions that are relevant in the initial phase and those that concern the operational phase. Within each group the questions were clustered according to the three tenets of sustainability (economy, ecology, social)⁹.

For the initial phase, questions regarding economic aspects of an Energy Garden project need to be answered in the short-term and have a high priority. Economic questions encompass the availability of suitable sites and requirements for acquisition; use of RES technology, especially PV panels; potential members, participants and customers; investments and the availability of funding sources; the most suitable legal form; and how the business model can be designed to enable efficient decisions. Social aspects have a high priority and need to be answered in the short-term as well: Which forms of dialogue and participation are necessary and how can the local community be integrated in the initial phase.

⁸ M. Bastiani et al. (2022), COME-RES D6.2 Four capacity development and transfer workshops reports, <https://come-res.eu/resource?uid=1359>

⁹ The summarising tables used in the workshop can be found in the Annex.

Ecological aspects have a medium priority and relate to the specific ecological challenges to be addressed by an Energy Garden in Thuringia. These last issues need to be answered in the mid- or even long-term.

For the operational phase economic aspects have (again) the highest priority, but need to be answered in the mid- or long-term only: Which operational costs occur? Is it necessary to constantly acquire new members, participants and customers to cover the operating costs of the project? Ecological questions have a lower priority for the general business model of an Energy Garden and address the ecological return potentials of the project. The last question in the operational phase considers the enhancement of a socially just energy supply in the municipality via an Energy Garden. This question was assigned a high priority during the operational phase.

At the end of the workshop, it became increasingly apparent what actions needed to be undertaken by which actors to address the challenges that were discussed along each question as well as the peculiarities of the Thuringian case. For all questions that were given a high priority and an answer within a short-time, responsibilities were also assigned.

The question of a potential site and requirements for such a site have the power to determine what kind of project can be implemented. Especially in a densely populated country such as Germany (and the Netherlands as well), site acquisition is a major barrier to the implementation of innovative energy project such as Energy Gardens. Due to the historic presence of the Soviet army in Thuringia, many former (contaminated) military sites require renaturation. This could be carried out by an Energy Garden, combined with an educational function about its former land use. The Thuringian Ministry of Environment, Energy, and Nature Conservation is currently working on a cadastre that comprehends contaminated and former landfill sites. Under certain conditions, such sites are suitable to host an Energy Garden. Next to renaturation, public accessibility is a positive effect.

3.1.4. Main Take-Aways

As participatory projects tend to have higher investments costs and longer realisation times, it is necessary to consider the economic viability of the project in detail: Open-space PV can satisfy a certain amount of energy demand, but additional RES plants can improve the economic viability of the Energy Garden. Medium-sized wind power plants can be a possibility in Thuringia. However, acceptability and administrative barriers still represent a challenge. Therefore, also other alternatives, e.g. the usage of biogas based on the residues from landscape management or perennial energy crops (e.g. energy grasses) should be considered. Depending on the technological choice the number of members, customers and participants is determined. Higher investment costs might require more stakeholders to contribute financially. Additionally, the legal form depends on the actors that participate in the project. Municipality, residents, SMEs, municipal multi-utility companies, and environmental NGOs are suitable actors for a Thuringian Energy Garden. The involved actors need to be acquired on a local level by local stakeholders, to enable a socially peaceful project.

Risk capital needs to be acquired, otherwise the project cannot be initiated. Different funding mechanism work differently and have different aims and prerequisites. These need to be considered to gain insights

which mechanism work best and are in line with the project aims (e.g. social acceptability and renaturation). Depending on the local actor network, different funding options may arise. The funding (or financialisation) of the project is strongly connected to the choice of the legal form, as it determines how capital can be acquired and how participation can be organised. The legal form has to be determined by local stakeholders and the municipality involved. Ownership models can be designed in participatory formats, although this might require high investments in the initial phase.

Another core aspect of the Thuringian Energy Garden is a proper participation to enable locals to accept the project. Many wind energy and open space PV projects show that local actors have the potential to stop or hinder the realisation of a project. As RECs projects are bottom-up projects, they are best implemented by relying on the local population and by empowering them to decide if and how they want to implement a RES project. As a general rule, all local stakeholders should be involved from the very beginning, already in the early planning stage, in the design process, and development of the project. The Dutch example has shown that Value Mapping and Co-Design are trustworthy formats and are suitable to empower local stakeholders and municipalities. The methods employed in the Dutch case can be transferred to Thuringia. How local stakeholders react to those aspects and possibilities remains to be seen, tested and (if necessary) adjusted.

Based on the fruitful discussions during the workshop a roadmap was developed. This roadmap has been substantiated by FUB. After the workshop it was sent to the participants and feedback was acquired. The final version of the roadmap – as a direct result of the ‘dynamic learning approach’ – is presented in Table 6.

In general, the example of the Energy Gardens was regarded as transferable to the case in Thuringia. For the implementation, the involved stakeholders stated, that the legal implementation of Energy Sharing represents a necessary condition for any REC to properly fulfil its purpose of initiating local value creation and societal advantages, such as addressing energy poverty or enabling sharing between stakeholders. Otherwise, RECs are too similar to economically-driven business models, such as citizen energy companies or regular energy cooperatives in Germany. An important step in acting is the willingness of the involved transfer partners to sign a Memorandum of Understanding¹⁰. This shows that a potential for Energy Gardens in Thuringia is seen and that the actors will work together to enable the initiation of such a project in Germany.

Table 6: Planning of Actions to Undertake in the German Transfer

No.	Step	Responsible Actor	Priority	Time
1	Preparation of a fact sheet/brochure with core elements of the Energy Gardens in the Netherlands and similar concepts in Thuringia (e.g. landscape park Nohra) and other federal states	ThEGA, FUB (COME RES), Bürgerenergie Thüringen e.V., Foundation Landscape Park Nohra	Very high	Short term (12/22)

¹⁰ The Memorandum of Understanding is attached Annex.

No.	Step	Responsible Actor	Priority	Time
2	Preparation of criteria for identification and choice of a potential site for an Energy Garden	ThEGA, COME RES (FUB, bbh, TU/e), Bürgerenergie Thüringen e.V., BUND Thüringen	Very high	Short term (12/22)
3	Signing of a 'Memorandum of Understanding' (before or ideally during the COME RES final conference in Brussels, probably on 31.1.2023)	COME RES (FUB, bbh TU/e), ThEGA, BUND Thüringen, TMUEN, Foundation Landscape Park Nohra, Bürgerenergie Thüringen e.V., EG Ilmtal, Natuur en Milieu Gelderland, Sunwatt, Klimaschutzstiftung Jena-Thüringen	Very high	Short term (01/23)
4	Screening of potential sites (out of 400 contaminated sites (listed in the Registry of Contaminated Sites (Altlastenkataster) (e.g. previous military use and/or landfills to be renatured)	TMUEN, ThEGA, BUND Thüringen	High	Midterm (02/23)
5	Identification of x suitable sites (according to pre-selection criteria). This should designate the optimal size of the site and the energy technologies that might be used in addition to PV	TMUEN, ThEGA, BUND Thüringen	High	Midterm (06/23)
6	Contact respective municipality/ies to be involved and check on interest	TMUEN, ThEGA	High	Midterm (07/23)
7	Set up a small working group out of mentoring experts and transfer team (driving force needed)	All: ThEGA, BUND Thüringen, TMUEN, Foundation Landscape Park Nohra, Bürgerenergie Thüringen e.V., EG Ilmtal, Natuur en Milieu Gelderland, Sunwatt, Klimaschutzstiftung Jena-Thüringen	High	Midterm (09/23)
Following the successful identification and pre-selection of suitable sites				
8	List of actors for the initial phase and for the implementation	ThEGA	Medium	Long term (11/23)
9	Adjustment and fine-tuning of criteria according to the identified and pre-selected site (involving municipal actors and other stakeholders of the potential site)	ThEGA, Bürgerenergie Thüringen e.V., BUND Thüringen, involved municipalities and key local stakeholders	Medium	Long term (12/23)

No.	Step	Responsible Actor	Priority	Time
10	Project conceptualisation (exploitation of synergies, e.g. large horticultural events like Landesgartenschau)	tbd	Medium	Long term
11	Establishment of a legal form (e.g. foundation (German: Stiftung) or other legal forms (e.g. association (German: Verein), cooperative (German: Genossenschaft), etc.).	tbd	Medium	Long term
12	Scouting sources for financing and application for funding	tbd	Medium	Long term

3.2. Spain-Spain Transfer

3.2.1. Transfer Concept

The Spanish process focused on the transfer of the COMPTEM project from Comunidad Valenciana which had been pre-selected as potentially suitable for its transferability to the Canary Islands. This COMPTEM builds on a historical, nearly 100-year-old local energy cooperative based in the municipality of Crevillent, which is located in the COME RES model region of Comunidad Valenciana (Spain). COMPTEM, which stands for “Community for the Municipal Energy Transition” in the local language, is the name given to the energy community created in late 2019 with the aim to expand the scope of the cooperative and develop a renewable energy community. This pilot project is considered innovative in itself because it constitutes a pioneering community energy experience at the national level. As such, it has attracted the attention of several institutional actors (among them the Ministry for the Ecological Transition), who see it as an example of the way forward for energy transition in Spain¹¹. The concept of this energy community is based on the generation, distribution and commercialisation of 100% renewable energy for its 11,000 members. Technology-wise, COMPTEM relies on PV solar energy generation facilities on public and private building roofs as well as on previously unused public plots of land. The current PV installation comprises 300 solar panels occupying an area of 600m² with a capacity of 120 kWp and producing 180,000 kWh per year, which amounts to around 50% of the electricity consumption of the 65 households in the vicinity. Another important technology of the plant is the energy storage system, a lithium-ion battery with a 240kWh storage capacity. At the methodological level, the aim of COMPTEM is to replicate the cellular mobile telephony model to a network of shared self-consumption installations, acting by "cells" with a radius of 500m.

To transfer lessons from the COMPTEM project, on June 28th 2022, representatives from the COME RES target region Canary Islands and of the Spanish Transfer Team travelled to Alicante, Spain to visit and learn from the best practice energy community. The stakeholders from the target region visited El

¹¹ P. Maleki-Dizaji, F. Rueda, et al. (2022): D5.3 Synthesis Report based on in-depth assessment of 10 transferable best practices, <https://come-res.eu/resource?uid=1308>

Realengo Park’s PV installation, energy storage facilities and electricity meters, located in Crevillent (Alicante). The COMPTTEM promoters made an in-depth presentation of the main features of the project, and interactive peer learning session focusing on selected aspects and measures of the project was held, including those related to legislation, business models, cooperation models, as well as the involvement of local governments.

Certain aspects of the COMPTTEM model were considered highly replicable by the stakeholders in the Canary Islands, particularly its financing model. COMPTTEM’s installations are owned by the prosumers, but it is the cooperative who made the initial investment, which allows all citizens, including those in situations of economic vulnerability, to participate irrespective of their income or savings. Another area of interest for the Canary Islands participants was the project’s approach to cooperation and involvement of the local government, whose role was instrumental for the viability and success of this REC. The municipality of Crevillent provided administrative support and assigned public spaces for the development of the REC’s activities, promoting the revitalisation of previously unused plots of public land and roofs. As a result from this learning experience, stakeholders agreed on the need to explore in more depth the most suitable legal forms and administrative procedures for the constitution of RECs in the Canary Islands, as well as its business/ financial model.

3.2.2. Transfer Team

The Transfer Workshop in Spain between the learning region (Canary Islands) and the mentoring region (Comunidad Valenciana, COMPTTEM energy community) took place on the 6th of October 2022 in the headquarters of the Cabildo de Tenerife (regional government), in Santa Cruz de Tenerife, Spain. The learning region team was composed of decision-makers and public authorities at the regional and local level, on the one hand, and energy community initiatives at different stages of development, on the other. The mentoring expert from the best practice case was Joaquin Mas, general director of ENERCOOP and main contact person of the COMPTTEM project (see Table 7).

Table 7: Participants of the Second Transfer Workshop in Tenerife

COME RES consortium members	Stakeholder in learning region	Mentoring experts from consortium and country of origin
<ul style="list-style-type: none"> Nicoletta del Bufalo (ECORYS) Irene Alonso (ECORYS) Gabriele Galassi (ECORYS) Xenia Gimenez (ACER) 	<ul style="list-style-type: none"> Pedro Apeles (Renewable Energies Office, Cabildo of Tenerife) Víctor García (Renewable Energies Office, Cabildo of Tenerife) Fidel Vazquez (El Rosario Solar energy community) Javier Gallego Simón (El Rosario Solar energy community) Carmela Diaz (Tacoronte energy community) Ivan Gimenez (Tacoronte energy community) 	<ul style="list-style-type: none"> Joaquin Mas (mentoring expert, COMPTTEM energy community)

	<ul style="list-style-type: none"> • Juan Carlos Darias (Tacoronte energy community) • Alexis Lozano (Gran Canaria Energy Council) • Nuria Albet (La Palma Renovable, “Energia Bonita” energy community) 	
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3.2.3. Overview of Discussions Dynamic Learning Lab

After a short presentation of the progress and development of the COME RES project, the “dynamic learning lab” was kicked-off. Overall, the activity saw a good and significant participation and active engagement from the stakeholders and actors present.

The initial part of the workshop focussed on the identification and assessment of the attitude that the participants had towards the three recommendations belonging to the COMPTTEM project in Alicante. In fact, the main purpose of this learning lab was to adopt a sound methodology to transfer the lessons learned when studying the Spanish example of best practice in the learning region of Canarias. The recommendations that emerged from the previous transfer learning workshop, as included in Deliverable 6.2, were the following:

- Expanding the learning region’s participants knowledge of COMPTTEM’s business model and explore its transfer / adaptation to RECs in the Canary Islands, particularly considering the following aspects of this model: (1) The REC acting both as energy producer and trader, (2) All prosumers to contract their supply with this trader, (3) The self-consumption installations to be used by the prosumers but are the property of the cooperative, (4) “As a service” model: The cooperative makes the initial investment.
- Exploring in more detail the energy sharing model of the COMPTTEM project for its transfer to the Canary Islands’ RECs. In particular, the focus should be in the collective self-consumption model (with/without surplus and compensation).
- Municipalities to expand their knowledge of / cooperation with RECs and, in particular, the legal and administrative formulas for the transfer/use of public spaces by RECs (e.g. through the formulas of authorisation or concession of public property, in Spanish, “concesión demanial”). In particular, the creation of a guide on energy communities for municipalities is recommended.

The ‘dynamic learning lab’ followed the structure presented in the methodology where each recommendation was associated with a number of questions that was used then by the moderators to guide the discussion and assess participants’ opinions regarding the replication of the COMPTTEM model in the Canary territory. It is important to underline the importance of such questions in light of the following steps of the lab. In fact, every question was clearly assigned to a precise category by the facilitator (i.e. governance, market/business model, legal forms, cooperative model). This categorisation fundamentally oriented the participants when thinking about their opinion and attitude regarding specific aspects of the COMPTTEM model and was useful for the following steps of the core “learning lab”.

The presence of a representative from the Alicante project (the mentoring expert), was a crucial added value for the development of the “learning lab” because he gave additional clarifications and explanations regarding the different recommendations and features derived from the best practice example.

The first recommendation addressed in the 2nd transfer workshop called for additional clarification and elaboration on the COMPTTEM business model. Such further explanations aimed at expanding the knowledge of the different participants about COMPTTEM's "As a Service" or "pay-as-you-go" system. As explained by the mentoring expert, this approach allows new members of the energy community to avoid making an initial investment or up-front payment in the moment of joining the REC. Instead, the initial investment is covered by means of a loan with a (preferably ethical.¹²) financial institution of choice, arranged by the cooperative. Once the installation is up and running, 50% the financial savings obtained from the energy savings of the installation are used to pay for the loan, while 50% of the financial savings is used to introduce a discount on the electricity bill.

The key part of this exercise regarded the translation of the “as a service” model into the learning region context and the discussion on this aspect saw quite relevant contributions from the different participants (i.e., one of the main arguments regarded the strictness of the memberships in the years after the establishment, wondering what could happen to members that feel like leaving the Community). The mentoring expert helped to clarify doubts and most importantly reach a common ground opinion from the audience regarded such aspect. The participants in fact reached an overall agreement on the positive aspects of the “as a service” model and the feasible transfer potential of such idea to the learning region context. However, for such model to be successfully implemented in the Canarian context, stakeholders from the learning region deemed necessary to provide some further modifications to render adaptation more possible. As such, specific bilateral discussions with the mentoring expert on a case-by-case basis were suggested as an adequate option to follow-up the transfer process.

The discussion then jumped to the questions related to the second recommendation, as in providing an in-depth understanding of the energy sharing model and the collective self-consumption aspect of it. During the learning session carried out on June 28th, 2022, the mentoring experts from COMPTTEM suggested the use of the simplified compensation mechanism. Simplified compensation of self-production surpluses is a mechanism regulated by Royal Decree 244/2019, which establishes that the energy generated and not instantly used (or discounted as a result of the hourly balance), should be registered in the energy meter, and translated into an economic value at a price established by the trading company. This value is then directly reflected as a discount in the electricity bill.

The set of questions related to this recommendation, and the discussion that came with it were very direct and smooth from the moderator perspective. In fact, the stakeholders invited did not address this aspect as one of the most urging issues to be discussed and thus any further conclusions related to this aspect were not given a high priority within the rest of the lab. The focus of the discussion shifted in turn

¹² Ethical banking, also known as social banking or alternative banking, is a group of financial institutions whose products are not exclusively conditioned by the criterion of maximum profit. In some cases, they also have an internal structure based on cooperative participation.

towards analysing the nature of the different entities benefitting from the energy produced by the community. Particularly, participants wondered how much and who could directly receive the clean community generated energy and how was this addressed by the organisational form of the Community.

The final part of this initial step of the “learning lab” consisted in administering a question to the audience to feed-in the discussion on the last recommendation derived from the first learning workshop, namely, how to build a concrete cooperative mechanism between municipalities and RECs. The model followed by COMPTM, named in Spanish “concesión demanial” or demanial concession, consists of an administrative act by virtue of which the public administration confers on a third party a right of private and temporary use of a portion of the public domain or a special right of common use of a duration exceeding four years¹³.

This aspect was particularly relevant for the audience and the discussion was relatively lively and active. The main outcome of this part was related to a series of concrete actions that municipalities can carry out to both cooperate with existing RECs and enhance the diffusion mechanism of Communities in the territory (i.e. the creation of uniformed guidelines for the development of community energy initiatives in the Canary Islands, the establishment of an information repository of all the relevant features and aspects that characterize an Energy Community, etc.).



Figure 3: Transfer Team at the Workshop in Tenerife

Source: ECORYS

Once this first part of the “learning lab” ended, the participants entered the second phase of the activity, namely the prioritisation of the actions derived from the first part. Using the categorisation provided by the moderator, it was possible to link the different actions with the pertinent recommendation addressed previously.

¹³DI Ripley (2004): La Utilización de los bienes de dominio público: Las concesiones demaniales en la nueva ley de patrimonio de las administraciones públicas. In: Actualidad Jurídica Uría & Menéndez 8, p. 25-36, <https://www.uria.com/documentos/publicaciones/1233/documento/trib02.pdf?id=2027&forceDownload=true>

3.2.4. Main Take-Aways

The key outcomes of the workshop are reflected in the Annex, which presents a matrix for the categorisation of questions. The prioritisation schemes reflect the attitude registered in the room during the initial stage of the “learning lab”.

The actions related to the first recommendation (implementing the “as a service” model) were given high priority levels, as it can be particularly useful at the early stages of the REC implementation. In particular, the model can increase social acceptance by eliminating a key entry barrier: the need for an individual initial investment. As such, it has the potential to boost citizen participation, including vulnerable groups. Overall, the main take-aways of the discussion consisted in the fact that each REC must bear the initial investment, possibly by leveraging resources through a financial institution, usually of ethical nature, or by harnessing public funds/grants. In this way, it is assured that the legal entity itself (be it an association, cooperative or else) becomes the manager of the REC. The model was considered to have a “handicap”, however: the charge for the “theoretically” free energy should be invoiced bearing a VAT, according to the tax authorities. This means that it takes a little longer to recover the investment. In addition to this, participants also manifested the need for additional professional advice and/or capacity building services to bring this model forward in their own projects.

The actions related to the simplification and cost reduction for the REC management were given average priority levels by the RECs from the learning region, which are currently in their early planning or inception phases of development, and who are struggling with adequately resourcing the management aspects of the REC (i.e. staff). This is due mainly to the fact that their business model isn’t fully deployed and in operation yet, and therefore the REC mostly relies on volunteer work during its inception phase.

According to the stakeholders involved, a simplification of the administrative procedures which need to be undertaken by the REC promoters at its early stages of development could contribute to mitigating this issue. In doing so, it was believed to be very important to engage with the relevant local and regional authorities, who can play a key role in the development of support/advisory packages specifically tailored for RECs. These may include services ranging from legal/ administrative advice, project conceptualisation and development support, or communication and awareness-raising activities.

Identified next steps includes the creation of a network of RECs facing similar challenges to address funding models and monitor legislative developments affecting REC development. Moreover, a standard (regional) protocol informing the creation of an open-source platform for metering individual consumption in a single portal, which would simplify management procedures (including invoicing) for RECs based in collective self-consumption models.

The actions related to the involvement of municipalities in a REC were assigned high priority levels and consists in activities to enhance the participation of political institutions in the Community Energy development.

The actions related to the adaptation of the cooperative model of COMPTTEM to municipalities to the Canary Islands were given high levels of prioritisation and consist in the development of a guidebook, especially designed for local governments, on legal models for cooperation with the transfer of public

spaces. There are different resources available that can relatively easily be adapted to the Canary Islands context. Additionally, participants requested professional advice and/or capacity building services to bring this model forwards in their own projects.

The actions related to simplification/reduction of RECs management costs were assigned average levels of priority as well as those actions related to the adjustments to be made to adapt the self-consumption with surplus simplified compensation model to the energy communities in the Canary Islands.

In conclusion, actions related to the advantages/disadvantages of the RECs in the region to become both producers and traders or the contracting of members for supply with the REC were not prioritised at all. For the first action, the audience decided that becoming an energy trader is not considered a profitable activity, as the REC would have to compete with other renewable energy market actors who offer lower energy prices. Moreover, the financial risk to which the municipality would be subject is too high. It could work but it would have to be with a well thought out prior study in order to have guaranteed future prices. Regarding the second action, the audience recommended and agreed upon the fact that free choice of energy supplier is maintained. Linked to this priority giving, the roadmap in Table 8 translates the levels of priorities with a set schedule of actions to undertake.

Table 8: Roadmap of Actions to Undertake for the Spanish Case

No.	Step	Responsible Actor	Priority	Time
1	Energy communities from the learning region who still haven't done so to prioritise the application for a grid connection point to the DSO and deposit the requested guarantee.	El Rosario Solar Tacoronte REC	Short-term	Nov. 2022
2	Energy communities from the learning region to assess the availability of government support schemes and/or private financial opportunities to put in place the "as a service" business model.	La Palma Renewable El Rosario Solar Tacoronte REC	Short-term	Nov. 2022
3	Interested stakeholders from the learning region to organise bilateral follow-up meetings with the mentoring experts in order to discuss the practicalities of implementation of the "as a service" business model, as well as its model of cooperation with municipalities.	El Rosario Solar Tacoronte REC Gran Canaria Energy Council	Short-term	Nov. 2022
4	Stakeholders from El Rosario Solar REC to convene a general assembly of members and propose the incorporation of a provision in the statutes of the REC allowing for a greater allocation of electricity produced to the municipality, provided	El Rosario Solar	Short-term	Dec. 2022

No.	Step	Responsible Actor	Priority	Time
	that it is in the general interest of all its members.			
5	<p>Preparatory discussions steered by the Renewable Energies Office of Tenerife towards the creation of an energy communities' network in the Canary Islands, to be initiated at the level of Tenerife (including stakeholders from the existing RECs in El Rosario, Tacoronte, La Laguna, and Adeje, among others).</p> <p>Such network would aim at exchanging good practices and knowledge, as well as identifying common barriers and priorities for action to inform public policy development at regional level.</p>	Renewable Energies Office of Tenerife	Short-term	Dec. 2022
6	<p>Gran Canaria's Energy Council and Tenerife's Renewable Energy Office to jointly explore the creation of an open-access and decentralised repository which takes stock of the state-of-the-art of Energy Communities in the territory and supports concrete capacity building actions.</p> <p>The platform should be understood as a living document so that it can be updated on a regular basis. Initially it should contain, at least, the following:</p> <p>A map of all the RECs in the region, including contacts</p> <p>A compendium of relevant resources (regulatory documentation, guidelines for the development of RECs, useful templates, etc.)</p>	Gran Canaria Energy Council Tenerife's Renewable Energy Office	Short-term	Dec. 2022
7	Launch of the energy communities' network in the Canary Islands (pilot in Tenerife): organisation of first meeting/ workshop and development of action plan with concrete objectives, resources, and expected results of the network. Prepare for the foreseeable expansion and	Renewable Energies Office of Tenerife	Short-term	Jan. 2023

No.	Step	Responsible Actor	Priority	Time
	involvement of RECs from other islands of the region.			
8	Energy communities' network to discuss with regional government about the development of a standard (regional) protocol informing the creation an open-source platform for metering individual consumption	Renewable Energies Office of Tenerife	Mid-term	Mar. 2023
9	Gran Canaria Energy Council to put in place a regional office to support the development of energy communities.	Gran Canaria Energy Council	Mid-term	2023

3.3. Latvia-Italy Transfer

3.3.1. Transfer Concept

Latvia focused on the transfer of the Italian best practice “Energy City Hall REC-1“(Magliano Alpi municipality, Piedmont region). In June 2022, a team of experts from Latvia travelled to Magliano Alpi to visit and learn from this best practice renewable energy community, which had been pre-selected as suitable in terms of successful transferability to Latvia. As a result, the transfer team considered the concept of the “Energy City Hall REC” as the one offering valuable transferable elements for Latvia’s and decided to deepen the understanding of the contextual aspects and discuss how to adapt the particular transferable elements to the Latvia’s context in a Transfer Workshop in Latvia in October 2022.

The best practice of “Energy City Hall REC-1“ provides the example of a municipality-driven REC. The public administration of Magliano Alpi made available, as the first investment, a 20 kWp solar PV panels system on the town hall roof and smart meters to manage data from the points of delivery of the REC members, as well as two electric vehicles (EV) charging points. The REC-1 was established in December 2020. Another REC (REC-2), coordinated by the municipality, was established at the end of 2021. Members of REC-1 comprise the municipality and several private consumers (both households and SMEs). The municipality is the promoter, coordinator, and main prosumer of the REC.

Energy cost reduction is the main benefit for the REC members. REC-1 aims at guaranteeing the self-sufficiency of the involved municipal buildings and sharing surplus electricity with the participating REC households and small enterprises. This municipality-driven REC is one of the activities of the municipal sustainable energy and climate action plan (SECAP).

The ‘Energy City Hall REC-1’ itself adds social value to the local community. The concept of the Energy City Hall REC-1 is based on the involvement of diverse local stakeholders - the local SMEs, engineers and technicians, installers, and maintenance workers – in the development and operation of the RECs. Thus, it is a catalyser of local sustainable development which goes hand in hand with electricity production to cover the needs of the REC members. GO-CER („Gruppo Operativo Comunita

Energetische Rinnovabili”) acts as an operational arm, which, with the support of the Technical Scientific Committee of the REC, favours the creation of (short) local supply chains and skill aggregation of professionals and business to stimulate local value creation. The social value also relates to that the RECs secure necessary resources for fighting energy poverty by sharing surplus of electricity production with families of vulnerable classes, which is one of the main aims of the local authority. In its turn, the Technical Scientific Committee addresses and supports technical issues related to the REC’s constitution.

Several key elements of the Italian best practice can be transferred, e.g.: key activities of the REC (energy production by solar PV technologies, electricity sharing, in future perspective also EV charging); knowledge development and capacity building of REC involved parties, particularly highly successful co-operation with national and international research and academia institutions, REC member partnership structure “municipality plus residential sector (households)”. Communication channels might be transferred partially, as they in a large extent depends on national particular circumstances. At the same time, the Italian regulatory framework and key funding and financial options for the REC currently is hardly compatible with Latvia.

The Latvian Transfer Team was composed of 8 stakeholders and 2 COME RES (IPE and LEIF) partners, in total 10 members. The transfer team included national, regional and municipal policy makers and the citizens community initiatives. The national policy level has been represented by both the Ministry of Economics and the Regulator (the Public Utilities Commission). The regional level has been represented by the Riga planning region. In turn, the municipal level has been represented by the Riga city Energy Agency and selected local municipality (*novads*). Local initiatives were represented by two citizens’ initiatives as well as by the Latvian Rural Forum as the national-wide umbrella organisation of local initiatives such as LEADER groups. The principle of the mix of the different levels to catch all features of the transfer case has been the key principle.

Prior to the transfer visit, the full description of the case (as provided by the Deliverable 5.3¹⁴) has been translated in Latvian and distributed to the members of the transfer team. After the visit, the prepared material has been added by including the specific information obtained during the transfer visit and made publicly available on LEIF website.¹⁵

As a preparation for the transfer visit, the Latvian transfer team carried out an on-line meeting to identify key questions for the visit and categorise them according to their content. Based on the meeting’s results and prior to the transfer visit, the detailed list of the issues/elements of the best practice, which the Latvian Transfer Team wanted to clarify in more details, has been sent to the Italian mentoring team. The Italian mentoring team included:

- representatives of COME RES partners in Italy (ENEA and Ecoazioni),

¹⁴ P. Maleki-Dizaji, F. Rueda, et al. (2022): D5.3 Synthesis Report based on in-depth assessment of 10 transferable best practices, pp. 84-91, <https://come-res.eu/resource?uid=1308>

¹⁵ G. Masa (2022, translated by M. Sosāre, A. Zučika): Paraugprakse ITĀLIJĀ ATJAUNOJAMĀS ENERĢIJAS KOPIENA “Energy City Hall-1”, http://www.lvif.gov.lv/uploaded_files/sadarbiba/2020_COMERES/Paraugprakse%20ITALIJA%20Atjaunojamas%20enerģijas%20kopiena.pdf

- representatives of the Magliano Alpi particular REC
- representative of Italian Forum of Renewable Communities,
- representatives of the Italian cities who are replicating Magliano Alpi's REC approach

After the warm welcome by the Mayor of Magliano Alpi and a short introduction about the COME RES project by ENEA, the training module started with the presentation of the “Manifesto of the Energy Communities for an Active Centrality of the Citizen in the New Energy Market” (by the Energy Centre of the Politecnico di Torino) as a shared vision on energy communities as the catalyst of a bottom-up approach to energy transition that led to Magliano Alpi's endeavour. One thing that came forward was that Magliano Alpi REC has been implemented based on the steps provided by the Manifesto. Following, the regulatory and enabling framework for RECs in Italy was presented by the Italian Forum of Renewable Communities. Latvian stakeholders were particularly interested in and widely discussed the economic viability of the REC. A wide spectrum of the Italian instruments - such as bonus incentive for the REC shared electricity, return of variable components of grid charges, investment co-financing and its sources - to support the REC were presented.

After this first part, the workshop turned to the „Energy City Hall REC– 1“project and the Magliano Alpi's RECs. The creation of „Energy City Hall REC-1“started in April 2020 when the “Manifesto” was promoted by the Energy Centre of the Politecnico di Torino and the City Council of Magliano Alpi joined. Subsequently, the operational management and creation of local supply chains by GO-CER have been presented. A very interesting part of the module was the dissemination of the Magliano Alpi REC experience over Italy, presented by the representatives of the replicating Italian municipalities. After the Italian presentations, the training module was continued with the interactive sessions centered on the questions „What did we learn?; What is transferable and how?; and How to overcome specific barriers?“. The training visit was concluded by the finetuning and adapting training module results.

3.3.2. Transfer Team

The Transfer Workshop in Latvia took place on the 6th of October in Riga. The workshop aimed to present and evaluate key lessons of the transfer visit in Italy and to develop a transfer roadmap in the form of a short-term action plan. Prior to the transfer workshop, following the ‘dynamic learning lab methodology’, the COME RES Latvian partners (IPE and LEIF) carried out an on-line meeting to develop a list of the introductory questions for the workshop. Also, a particular on-line meeting with the group's moderators was held to explain in details the overall methodology and procedures to be performed within the transfer workshop. In total the Transfer Workshop has gathered 28 participants (24 Latvian stakeholders and 4 COME RES partners (IPE and LEIF) representatives).



Figure 4: Transfer Team at the Workshop in Riga

Source: LEIF

As the introduction of the Transfer workshop, Aija Zučika (LEIF) has presented both the COME RES project at a glance and the Transfer activities in the frame of the COME RES. Then, the Italian mentors gave an on-line presentation, followed by a brief Q&A. The Latvian stakeholders were given the chance to interact with the Italian mentors to learn more about certain particular aspects of the given Italian best practice and get their recommendations for the sequential process of creating the REC. Following, the lessons and recommendations, resulting from the Transfer visit in Italy, was summarised by the Ivars Kudrenickis (IPE)

Afterwards, the Transfer workshop has continued in two moderated groups in which Latvian stakeholders, by applying the ‘dynamic learning lab’ method, based on both the information, lessons, recommendations resulting from the Transfer visit and on-line exchange with Italian experts, have discussed the most important steps for adapting the experience of the “Energy City Hall REC-1” in Latvian context/conditions. At the end of the Transfer Workshop the presentation of group work results was performed. Thus, one of the key results of the Transfer workshop is the created transfer roadmap – short term action plan. The agenda of the Transfer Workshop can be found in the Annex.

Table 9 below gives an overview of the Latvian stakeholders that participated in the Transfer workshop. The composition of the stakeholders represents the different levels of public administration – local municipalities, planning region, national authorities and local initiatives. Also, national-wide NGOs –the association „Latvian Rural Forum “and society „Green Liberty “, actively promoting the RECs concept in Latvia, as well as the experts studying the potential impact of REC operation on the power grid participated.

Table 9: Participants of the Second Transfer Workshop in Latvia

Type of organisation	Number of Participants
municipalities and local initiatives	11
regional level	3

national authorities	3 (the Ministry of Economics, the State Construction Control Bureau of Latvia ¹⁶ , Investment and Development Agency of Latvia)
Latvian Union of Local Governments	1
Latvian DSO (SC “Sadales tīkls”)	2
national-wide NGOs	2
experts of Riga Technical University	2
Latvian COME-RES partners (LEIF and IPE)	4

The Italian mentoring team participated on line and was represented by Sergio Olivero, President of the Scientific Committee of the REC of Magliano Alpi; Luca Barbero, Coordinator of GoCER and Gilda Massa, ENEA.

3.3.3. Overview of Discussions Dynamic Learning Lab

As an initial step within the ‘dynamic learning lab’, an introductory set of recommendations for systemic innovation regarding the transfer case of the “Energy City Hall REC-1” was formulated based on the recommendations from the previous activity – results of the transfer visit in Italy. For the purposes of the transfer workshop in Latvia, the wide set of the recommendations, arising from the Transfer Visit in Italy, as provided in D6.2 [Four capacity development and transfer workshops reports]¹⁷, have been grouped in 4 principal recommendations:

- To increase interest and local support for the renewable energy community (REC), the municipality shall create awareness among residents and take the active role in the first RECs;
- For the development of the REC, it is necessary to ensure both expert support to the REC and communicate the REC in the local society as a whole;
- The legal form of the REC shall be chosen and should consider various aspects; in particular the planned business model of REC, type and diversity of REC members and the legal framework governing the operations/eligible activities of the municipality;
- The start-up and sustainable operation of the REC requires (financial) support at various stages of REC establishment and operation.

As one can see, these recommendations emphasise the role of the municipality, the economic viability of the REC project, legal model and communication with the actors interested in the REC. In the first phase of the transfer workshop, the participants were invited to put forward relevant questions to better understand the context of these initial recommendations.

During the moderated discussion within the groups, answers were found to some of the initial questions. Some of the questions were recognised as irrelevant, at the same time in the course of the group’s discussion also new questions, which were recognised as important for the adaptation of the municipality-driven REC practice in Latvia, were identified and formulated. As a result of the group work,

¹⁶ the state authority responsible for the establishment of the Register of Energy Communities, its administration and maintenance,

¹⁷ M. Bastiani et al. (2022), COME-RES D6.2 Four capacity development and transfer workshops reports, <https://come-res.eu/resource?uid=1359>

an agenda of issues to be discussed in the next step was formulated. The key questions, well demonstrating the challenges for the establishment of municipality-driven REC and thus needed to be answered, are:

- What are the strengths of a municipality as a promotor of the REC model?
- Have the motivating factors of the particular municipality to establish or lead the establishment of the REC been clarified?
- Do municipalities see the REC as an instrument to meet climate change mitigation targets at the municipal level?
- Are there barriers for the municipality, due to Latvia's legal regulations, to participate in a REC? What legal forms of energy communities are suitable for municipality-driven REC?¹⁸
- What are the restrictions, if any, of the municipality to provide initial investments to start the operation of the REC?
- Could the existing activities of local residents' communities¹⁹ represent the platform to help the municipalities for REC development, particularly for members recruitment?
- What are the needs of the municipalities and other potential REC participants for increasing their knowledge and capacity and what are the possibilities (options) to provide such capacity building?
- Which electricity market participants and institutions can provide the information regarding electricity consumption profiles of potential REC members?
- What are the most appropriate channels to provide information and to communicate with REC interested participants?
- What are the strengths, weaknesses and restrictions of various legal forms regarding the (i) planned business model of REC, (ii) type and diversity of REC members?
- What is the capacity of the municipal budget to invest in the activities on REC establishment and operation?
- Which solar PV technologies investment co-financing programmes in Latvia consider the energy communities as beneficiaries?²⁰

As the second step of the workshop, the participants ranked the importance of questions to be answered. The importance of the question is represented by the priority in-time– the question which should be answered in a short time has a high priority. The questions were split up into relevant groups including governance structure, legal forms, business model (activities in the energy market), cooperation model. The questions which did not fit into any of these groups were gathered in the group "Others"²¹. Part of this exercise was to determine which actor ought to act in answering specific questions. During this step, it became increasingly apparent what actions needed to be undertaken by

¹⁸ Latvia's legislation framework on energy communities states a range of various legal forms of them - the association, foundation, cooperative society, commercial company - partnership or capital company, other civil liability society.

¹⁹ For example, homeowners associations (particularly established as the legal form of the association), local LEADER group, „smart village“ group.

²⁰ The full set of the questions can be found in the first table of Annex.

²¹ The summarising table can be found in the Annex.

which actors to address the challenges for the implementation of municipality-driven RECs in Latvia. The discussion reflected the peculiarities of the Latvian conditions of different kind.²²

3.3.4. Main Take-Aways

General motivating factors for the municipality-driven REC were identified:

- the REC enables the municipality to optimally use (self-consume, share, sell) produced electricity;
- economic benefits (lower energy bills) for both the municipality and other members of the REC;
- production of green and fair energy;
- increase of energy supply security due to the implementation of decentralised technological solutions;
- promoting sustainable development in the area of the municipality;
- providing aid for vulnerable households and other social-type benefits;
- the REC is seen as the one of instruments to reach climate neutrality in the municipality.

One important motivator could be also the availability of the financial support (investment co-financing) provided to the municipalities regarding the REC. At the same time for the particular municipality the focus of the motivation may differ.

The compatibility of the municipality legal framework and the REC legislation to allow enough flexibility for municipalities to participate in a REC was underlined as a crucial requirement for the transfer. The questions raised during the transfer workshop should be adequately reflected during the development of the guidelines regarding public institutions participation in the REC.²³, to be developed by the Ministry of Economics, in co-operation with the Ministry of Environmental Protection and Regional Development, up to 30th June 2023. Considering and ensuring this compatibility, it is not excluded that it will be necessary to clarify these aspects by particular governmental regulations (as a higher-level legal document compared to guidelines). Not excluding SMEs, the first priority can be a municipality-driven REC involving households (natural persons).

During the transfer workshop a discussion ignited on the overall framework to be prepared by the municipality and adopted as a municipal by-law. Participants argued Municipalities should have clear conditions for the use of their property by other legal subjects or transfer of electricity, produced by municipality owned plants, to other legal subjects. Thus, the municipal by-law should answer issues such as: (i) why the municipality provides/rents its property (land, public building roof) to the REC - to determine what purposes, particularly social ones, the REC will met, (ii) a methodology shall be established to determine for what fee the municipality will rent its property, (iii) if the municipality is an owner of RES plant, a methodology should be established for determining at what remuneration the

²² The summarising table can be found in the Annex.

²³ „Guidelines for the Formation of Energy Communities, including the recommendations for public persons (public authorities) regarding providing the support for energy communities and their participation in energy communities“. Development of the Guidelines is stated by the 14th July 2022 Amendments to Energy Law establishing the general legal framework for energy communities in Latvia.

municipality will share electricity with other members of the REC, vulnerable households might be included applying a special discount for them.

As participatory projects tend to have higher investments costs and longer realisation times, it is necessary to consider the economic viability of the project in detail. The municipality-driven REC can provide avoiding (or at least minimising) the burden of REC upfront costs and investment costs for the REC members – households. The involvement of the municipal administrative capacity can also help to overcome administrative issues.

The legal form will depend on the potential actors that participate in the REC project, the suitability of the legal form for the municipality as well as the business model of the REC. The legal form has to be determined by the municipality and local stakeholders involved. To promote local benefits, the involved members/shareholders need to be recruited on a local level. For the moment, investment co-financing seems to be the only potential financial support for REC development in Latvia. The legal framework for energy sharing²⁴ is highly important, as it represents a necessary condition for any REC to properly fulfil its purpose of initiating local value creation and societal advantages. Otherwise, RECs will be too similar to economically-driven business models.

In general, the best practice of the “Energy City Hall REC-1” has been regarded as transferable in principle. The transfer workshop provided contribution for the identification of the transferable elements and singled out the necessary preconditions for their transfer. Based on the fruitful discussions during the workshop, a roadmap in the form of a short-term plan of actions was developed. This roadmap has been validated in the Latvia’s Country Desk Meeting organised back-to-back to the Transfer Workshop. The final version of the roadmap – as a direct result of the ‘dynamic learning approach’ – is presented in Table 10.

An important step in taking action is the willingness of the involved transfer partners to sign a Memorandum of Understanding. This shows that a potential for the municipality-driven REC in Latvia is seen and that the actors will work together to enable the initiation of such a project in Latvia. The transfer workshop has provided valuable contribution to understand the cooperation framework for the different Latvian stakeholders and the communication with the potentially interested in the Memorandum which sets the basis for future common work after the transfer workshop.

Table 10: Roadmap of Actions to Undertake for the Latvian Transfer

Month	Action to undertake
<p>Oct 2022 – Feb 2023 June 2023</p>	<p>All interested stakeholders contribution in completion of the detailed legislative framework regarding energy communities</p> <p><i>The Ministry of Economics is currently elaborating the specific governmental regulations detailing the general legislative framework of energy communities, to be adopted by the government up to 28th February 2023 as well as the Guidelines for public persons, including, municipalities²⁵, to be adopted by 30th June 2023.</i></p>

²⁴ Detailed Latvian governmental regulations should be elaborated up to 28th February 2023, as the stated by Amendments, 14th July 2022, to the Electricity Market Law.
²⁵ Guidelines for the Formation of Energy Communities, including the recommendations for public persons (public authorities) regarding providing the support for energy communities and their participation in energy communities.

	<p>Municipality-driven model will be advocated to be included/explained in the above noted Guidelines.</p> <p>IPE regular contribution in reviewing the subsequent drafts of these regulations and submission of proposals to promote municipality -driven REC model.</p>
Oct –Dec 2022	<p>Identification of interested areas for REC pilot sites</p> <p>Latvia’s Rural Forum seeks for interested partners for RECs development in rural areas, within the feasibility study financed by the German Federal Environmental Foundation (<i>Deutsche Bundesstiftung Umwelt, DBU</i>).</p> <p>Identifying, in the dialogues (to be covered in all five Latvia’s planning regions) with interested in REC parties -such as municipalities (buildings of schools, kindergarten and another public facilities), local communities, homeowners and homeowners associations, local residents -at least two pilot areas for the first REC in Latvia.</p> <p>Providing information on legal, technical and another practical aspects of REC operation and REC establishment steps.</p> <p>Recommendations for national- and local- level policy makers.</p>
Oct –Dec 2022	<p>Riga city Energy Agency will consult and provide assistance for the parties interested in the REC establishment, including municipalities, to submit the Technical Assistance Application to the EU Energy Communities Repository.</p>
Q1 2023	<p>Latvia’s Rural Forum develops and submits, based on a feasibility study, the full-scale project for the REC establishments in at least two selected pilot areas, including the technical-economic study and the technical-organisational solutions</p>
2023	<p>Riga city Energy Agency will test the concept of the establishment of electricity sharing for the already installed solar PV on municipal building rooftop.</p>
up to April 2023	<p>REC interests in solar PV investment co-financing programme promoted</p> <p>Cabinet of Ministers regulation developed (and preferably adopted) regarding the implementation procedure of the ERDF (Latvia’s EU Cohesion Policy Programme for 2021-2027) co-financed solar PV investment programme.</p> <p>REC interests to be actively advocated by all interested stakeholders during the public consultation phase.</p>
April 2023	<p>Calculation example, based on the model (developed by IPE in cooperation with a PhD student of Riga Technical University) demonstrating the necessary pre-requisites for the economic viability of the REC.</p>

3.4. Italy-Belgium Transfer

3.4.1. Transfer Concept

The Italian case focussed on the transfer of the Ecopower experience to the city of Roseto Valfortore. The foundations for Ecopower were laid in 1983, as an initiative of a handful of citizens to finance the renovation of the hydropower installation of the watermill of Rotselaar, in the province of Vlaams-Brabant. In 1991, the citizen energy cooperative ‘Ecopower’ was officially established, with the aim of gathering people in a cooperative to invest in the production, and supply of renewable energy and to promote energy efficiency. The first milestone of the cooperative was winning the tender issued by the city of Eeklo, in the province of Oost-Vlaanderen, that allowed Ecopower to build 3 wind turbines (two of 1.8 MW and one of 600 kW) in 2001-2002.

Ecopower collects funds from its cooperative members to invest in, install and manage various installations that produce renewable energy. For electricity, those comprise wind turbines and PV

installations on public roofs, a small hydro installation, and a cogeneration power plant. In 2020, 106 GWh of renewable electricity was produced by Ecopower. Ecopower also acts as an energy supplier: it supplies its members-customers with the renewable electricity that was produced in their installations. At the end of 2020, Ecopower counted 60.976 members and almost 50.000 electricity clients.

3.4.2. Transfer Team

The return visit took place in Italy on the 10th of October in the City Hall of Roseto Valfortore. The aim of the Learning Lab was to systematise the recommendations that emerged from the two-day meeting in Belgium and outline a possible transfer roadmap. During the transfer visit in Flanders region, the Apulia transfer team and the Belgian Experts compared the legislative, administrative and regulatory context for RECs in Italy and Flanders and business model and the capacity of stakeholders engagement of Ecopower. Starting from the recommendations gathered, he team planned the next steps and the feasibility of specific actions.

The transfer team involved consisted of both the participants of the event in Belgium and other experts, municipal officers and members of the CER. The expert from Ecopower presented the main element of their models and the experience from the beginning. The transfer team member of the municipality were the public officers in charge of the energy community project implementation, for feasibility, implementation plan and installation of PV plants. In the team discussion were involved also partners of SMEs interested in REC business model and members of the REC governing board. Table 11 gives a comprehensive overview of the transfer team.

Table 11: Participants of the Second Transfer Workshop in Italy

COME RES consortium members	Stakeholder in learning region	Mentoring experts from consortium and country of origin
<p>ENEA Gilda Massa</p> <p>Ecoazioni Virna Veneruci</p>	<ul style="list-style-type: none"> • Mayor of the Roseto Valfortore municipality, the project coordinators from the local municipalities, Lucilla Parisi • Roseto Valfortore municipality, the technical expert from the local municipalities, Ulderica Lucera • Roseto Valfortore municipality feasibility project and implementation plan, Rossi Stefano • Roseto Valfortore Energy Community, Enzo Antonio d'Avanzo • The citizen Association, Expert in governance, 	<p><i>Ecopower, Margot Vingerhoedt (remote connection)</i></p>

	<p>citizen empowerment, Annunziata D'Avanzo</p> <ul style="list-style-type: none"> • SME involved in an energy Community, Michele Raffa • SME involved in an energy Community, expert on business model Vincenzo Raffa 	
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The Italian transfer workshop opened with the presentation and analysis of Flanders REC best practices and a wrap up of the first transfer visit, followed by a brief Q&A. Then, the meeting continued with a discussion on the lessons learnt from ECOPOWER experience and on recommendations collected in earlier D6.2 “Four capacity development and transfer workshops reports”. In a preliminary desk activity, starting from those recommendations, ENEA and ECOAZIONI with the support of VITO defined a series of questions by adapting them to the Apulian context. These questions were prepared considering the Roseto Valfortore area, the regulatory system currently in force not only at national but also at regional level, the vocation of the area and the degree of progress for the development of the local Energy Community.

3.4.3. Overview of Discussions Dynamic Learning Lab

The discussion started by addressing the three main questions relating to the creation and management of a REC: governance, legal form, activities and cooperation model. During the Learning Lab, the team discussed the critical issues, such as the role of politics in the local development of the REC and the barriers related to regulatory constraints. As Italy and the Belgium have different institutional settings and legal constraints, it is necessary to evaluate which aspects can be transferred directly and which need to be adapted and how. In Flanders Region the REC can act as an energy provider, in Italy this is not allowed according to current legislation. Citizens' awareness of the decisive role of renewable energy sources in Belgium started with the Chernobyl disaster, in Italy it is an ongoing growing process. A strategic element identified and learnt from Ecopower’s history is the active participation of citizens and their involvement. The more citizens joining, the greater the benefits in terms of environmental protection, self-sufficiency, energy saving and the spread of renewables. Therefore, an important discussion item revolved around the communication strategy to engage citizens in a REC.

The team highlighted that the active participation of the municipality is strategic to increase citizens' trust and therefore the municipality has to start acting as a driving force, creating events to disseminate the REC model, as a political actor towards the region for the development of legislation suitable for the growth of RECs, as a member of the REC that makes available areas of suitable size for the plants.

The comparison with Ecopower led to insights concerning 1) The energy community model that have to be developed in the area, 2) the strategic role of the municipality, 3) The business model, 4) The projected growth through the active role of the utility company that installs the panels. During the comparison, some issues highlighted by the Belgian team of experts were found not to be comparable to the Italian case, due to the different institutional and regulatory framework. Questions that were

identified as being relevant and therefore addressable in terms of solutions and proposals in the short, medium and long term were also analysed through the examination of forecasting details on the territory's data.

The REC discussed the business model in detail: simulations were carried out on the business model and the impact of the REC, while other possible solutions and alternatives were discussed in detail by using an impact analysis. The configuration of the REC was simulated based on who had already expressed an interest in joining. Starting from the annual consumption data of these participants, the data were processed by evaluating the estimated energy production reduced by the share of physical self-consumption on site and therefore, as required by law, identified the minimum between energy input and withdrawal. Through these analyses, the sustainability of the business model based on the envisaged state incentive was assessed, as per national legislation. This incentive from GSE (National Energy Service Management) could be the cost item of the business model (as a quota for the rental of the plants), but part of it should identify the revenue to invest in the purchase of new plants as occurred in the start-up phase of Ecopower.



Figure 5: Transfer Team at the Workshop in Roseto

Source: Gilda Massa

Another point discussed was the lack of expertise to support the REC creation and development. On this aspect, ENEA is working at national level with several web tools for RECs analysis and for decision support systems and will propose to the REC of Roseto to take part in the community platform when it will be released.

3.4.4. Main Take-Aways

In order to act collectively instead of individually it is essential to generate economies of scale by sharing knowledge and resources. The Covenant of Mayors could join force and act collectively following and improving the regional guidelines on energy saving. The municipality of Roseto will work to promote and spread the ROSETO REC model in the local scenario, involving mayors of neighbouring areas. The project partners will support in the creation of information materials and in the organisation of meetings to share the REC experience. To this end, Table 12 presents a concrete roadmap of actions feasible in the Italian scenario inspired by the Ecopower model.

The Roseto experience and the comparison with Ecopower showed that the general energy community model may be common to various national contexts regarding technologies and data, but it is always very specific with regard to governance and business model. The involvement and role of the various stakeholders in the energy community are strategic success factors: information and communication are two fundamental tools for the Italian context. Understanding the problems of a small municipality like Roseto is fundamental for territories made up of municipalities with less than 5000 inhabitants. Also fundamental is the trust and motivational aspect that comes from direct stakeholder participation.

Table 12: Roadmap of Actions to Undertake for the Italian Transfer

No.	Step	Responsible Actor	Priority	Time
1	Design of flyer information material with the key elements of the Ecopower model that can be transferred to the REC Roseto Valfortore.	ENEA ECOAZIONI (COME RES), Municipality of Valfortore and REC Roseto Valfortore	Very high	Short term (12/22)
2	Participation and social animation activities, 2-3 meetings for stakeholders and citizen	Municipality of Valfortore and REC Roseto Valfortore ENEA ECOAZIONI (COME RES),	High	Short term (12/22-01/23)
3	Revision of the Statute of the REC Roseto Valfortore, to adapt it to the Ecopower model in terms of participating citizens, and acquisition of new renewable energy plants	Municipality of Valfortore and REC Roseto Valfortore, expert ENEA ECOAZIONI (COME RES),	Very high	Short term (01/23)
4	Event and meeting with national relevance for the connection of the CER	Municipality of Valfortore and REC Roseto Valfortore, national representatives ENEA ECOAZIONI (COME RES),	Very High	Short term (12/22-01/23)
5	Development of an easy-to-read REC (production and consumption) monitoring model for all REC citizens / members	REC Roseto Valfortore, expert	High	Mid term (06/23)
6	REC Roseto Valfortore becomes a model in the Apulia Region Screening of potential sites in the Apulia Region, on which to transfer the REC Roseto Valfortore model.	Municipality of Valfortore, REC Roseto Valfortore and Apulia region	Very high	Mid term (06/23)
7	Contribution to the revision and implementation of the regional legislation on REC	Municipality of Valfortore, REC Roseto Valfortore ENEA ECOAZIONI (COME RES),	Very high	Long term (09/23)

4. Conclusion

Reflection on four transfer processes

Overall, the four cases show how it is indeed possible to transfer best practices across national borders. However, in this process, it became very much clear how some aspects of business models are very specific to the national context. For instance, a full transfer of the Ecopower experiences was not possible as under the current legal framework RECs are simply not allowed to become an energy supplier in Italy. Likewise, the transfer of the Dutch experiences to Germany was challenging as the Dutch organisations had a completely different model of organizing finances compared to the German stakeholders.

Another finding is how it is challenging to prescribe a single methodology for the construction of a roadmap for all cases. Practice in the four cases showed how it is already difficult enough to come to a joint understanding of the problems and recommendations when dealing with two different national contexts. For instance, in the Dutch-German case, the full time of the workshop was spent to pin down what exactly where the issues/opportunities in transferring the Energy garden practice, that there was scant time to discuss what kind of assumptions underlie these opportunities in the first place. In the light of the above, it might be too far of a stretch to also expect a deep reflection upon assumptions in workshops. In this light, this report recommends to keep methodologies for transfer roadmaps as simple as possible so that practitioners can adapt them to local needs.

Ways Forward

This deliverable is the end point of a series of intertwined deliverables within COME-RES (D4.3, D5.3, D6.1, D6.2). In the period after the transfer workshops, the four transfer teams were engaged to design and organise the signing of a 'memorandum of understanding' between parties in the different countries which will be celebrated in the COME RES final conference in Brussels on 31 January 2023. Such a memorandum of understanding seeks to facilitate the sharing of knowledge beyond the lifetime of COME-RES. While partners are currently making an effort to give life to such a memorandum, in the end it is up to the stakeholders to choose adequate and promising forms for cooperation. In any case, by inspiring and sustaining cooperation, COME-RES has tried to begin a sustainability strategy ensuring that major project outputs are continued and further deployed after the end of the project.

5. Annex

5.1. Germany-The Netherlands Transfer

5.1.1. Agenda of the Transfer Workshop on 14 October 2022 in Erfurt

TIME	PROGRAMME
9:30	<i>Registration & Coffee</i>
10:00	Welcome <i>Prof. Dieter Sell, Thüringer Energie- und GreenTech-Agentur</i>
10:10	Transfer activities in the frame of COME RES <i>Dr. Rosaria Di Nucci (Freie Universität Berlin)</i>
10:20	Introduction to the workshop <i>Michael Krug (Freie Universität Berlin)</i>
10:30	Idea, concept and planning of the Energy Gardens (online presentation) <i>Alex de Meijer, Natuur en Milieu, Gelderland</i>
10:50	Solar farm de Kwekerij (online presentation) <i>Willem de Lint, Sunwatt B.V., tbc</i>
11:10	Questions and answers about the Energy Gardens <i>Moderation: Michael Krug (Freie Universität Berlin)</i>
11:40	<i>Break</i>
12:00	Workshop: Which elements of the Energy Gardens can be transferred to Thuringia? (German) Part I: Requirements for and prerequisites of potential area(s)/multiple uses (<i>Moderation: Dr. Rosaria Di Nucci, Freie Universität Berlin</i>) Part II: Involved actors during the initial and operational phase (<i>Moderation: Michael Krug, Freie Universität Berlin</i>) Part III: Potential business models for community energy, legal forms, funding and financing possibilities (<i>Moderation: Prof. Dörte Fouquet, bbh</i>)
14:00	<i>Break</i>
14:45	Feedback und concluding discussion with <i>Alex de Meijer, Natuur en Milieu, Gelderland</i> and <i>Willem de Lint, Sunwatt B.V.</i> (<i>Moderation: Rien de Bont, Technical University of Eindhoven</i>) <ul style="list-style-type: none"> • Elements of a transfer roadmap • Possible cooperation in the future/Memorandum of Understanding
15:20	Summary and outlook <i>Dr. Rosaria Di Nucci, Michael Krug (Freie Universität Berlin)</i>
15:30	<i>End of the workshop</i>

5.1.2. Recommendations & Questions for Systemic Innovation of the Transfer

Recommendation	Question for systemic innovation
There should be a reasonable size for the Energy Garden in Thuringia to operate financially stable (especially if Energy Sharing is not enabled yet).	<i>What is the optimal scale of the project in Thuringia to be economically viable without having to rely on Energy Sharing?</i>

<p>A suitable site should be preferably owned by a municipality and be a degraded or contaminated site (e.g. within the contaminated sites cadastre).</p>	<p><i>Are suitable sites already available? Who owns such sites? How can the site be best integrated into local land use concepts?</i></p>
<p>The combination of actors that are involved in an Energy Garden have to fit to the business model and visions of the municipality and involved stakeholders.</p>	<p><i>How can the ownership model be designed in order to enable efficient decisions while maintaining social peace among the stakeholders and local residents?</i></p>
<p>NGOs and/or municipalities are often perceived as trustworthy and their direct involvement can help enhancing the acceptability of the project.</p>	<p><i>Who are suitable actors to implement an Energy Garden in Thuringia? How can local NGOs (such as BUND) come into play?</i></p>
<p>The main focus of actors should stay on the municipal level. Because of the current legal framework, energy sharing is practically not possible for the members of an energy community including residents yet. Once it becomes possible -depending on the location of the gardens- local households will become a target group.</p>	<p><i>How can local customers be acquired? How can the Energy Garden be implemented without having to rely on the possibility that Energy Sharing might be introduced in German legislation? Are there other ways to tap into local structures and exploit synergies to promote the project and acquire customers?</i></p>
<p>It is advisable to pursue two different kinds of financial backing, one for planning and initiating the process (initial phase) and one for the land purchase, installation of the renewable energy technology and ecological measures (operating phase).</p>	<p><i>What investments are necessary? Which sources of financing are necessary and available? Is it necessary to constantly acquire new members in order to cover the costs of the operating phase?</i></p>
<p>There could be advantages in splitting the 'social' (e.g., the participation process, renaturation) and the 'commercial' part (the renewable energy infrastructure) of the Energy Garden project. This should also involve separate funding.</p>	<p><i>How can the participatory process be carried out to be meaningful and not counteract the economic viability of the project?</i></p>
<p>Local educational institutions, e.g. kindergartens, schools, adult education centers, and universities are important partners. Their inclusion in the Energy Garden provides a great opportunity to offer education on subjects such as biology, sustainability, energy production and consumption, etc.</p>	<p><i>Which actors are suitable to create synergy effects? How can these synergy effects look like and how far can they reach?</i></p>
<p>The possibility to involve commercial actors (for example land owners) should not be ruled out a priori. They could be interested in investing in the 'social' elements of the Energy Garden, as they might want to enhance public acceptance or improve their image.</p>	<p><i>Which economic aspects from the Dutch Energy Gardens can be directly transferred to Thuringia? Which aspects require adaptation?</i></p>
<p>In the Netherlands, solar energy based on ground-mounted solar panels is the dominant technology in the energy gardens. In Thuringia one could also try to embed (medium-sized) wind turbines in the gardens and other forms of plants such as biogas (e.g. using residues from landscape management or energy grasses) to showcase the different possibilities of</p>	<p><i>Which RES technology can be used in addition to PV? Is it feasible to combine different technologies?</i></p>

<p>renewable energy sources. This approach is especially suitable for energy gardens with a focus on education. In terms of total energy production, PV might remain the dominant form of energy production.</p>	
<p>The most important aspect of the initiative is the activation of local citizens to create a bottom-up dynamic. The transfer of the Dutch best practice case can only succeed if local stakeholders (e.g. municipalities, mayors, etc.) and residents take the initiative. Authorities can only assist this development by providing information and support to citizens. A merely top-down approach can be counterproductive.</p>	<p><i>Are citizens the only engine of a bottom-up dynamic or can a municipality fulfil this function as well?</i></p> <p><i>Which forms of dialogue and participation are necessary in the initial phase of the project? How can the local community be included in the initial phase? How can Mapping Values and Co-Creation from the Dutch Energy Gardens be transferred to Thuringia (and are those methods suitable)?</i></p>

5.1.3. Matrix Categorization of Questions

Category	Questions	Priority (in time)
Initial Phase		
Economic Aspects	<ul style="list-style-type: none"> • Are potential sites available? What are the requirements for a potential site? • Which RES technology can be used in addition to PV? • Who are potential members/ participants/ customers? • Which investments are necessary? Which sources of funding are available and suitable? • Which legal form is suitable? • How can the legal/organisational form be designed to enable efficient decisions? 	<ul style="list-style-type: none"> • All those questions are part of the initial phase and therefore need to be answered in the short-term. • Very high priority.
Ecological aspects	<ul style="list-style-type: none"> • Which ecological problems/ challenges can be addressed by an Energy Garden in Thuringia? 	<ul style="list-style-type: none"> • Mid-term to long-term • Medium priority
Social aspects	<ul style="list-style-type: none"> • Which forms of dialogue/ participation are necessary (to increase acceptability)? • How can the local community be integrated in the initial phase? How can the participation methods from the Dutch Energy Gardens be transferred to Thuringia – and are those methods suitable for Thuringia? 	<ul style="list-style-type: none"> • Short-term • High priority

Operation Phase		
Economic aspects	<ul style="list-style-type: none"> Which operational costs occur? Is it necessary to constantly acquire new members/ participants/ customers in order to cover the operating costs? 	<ul style="list-style-type: none"> Mid-term to long-term Very high priority
Ecologic aspects	<ul style="list-style-type: none"> Is an 'ecological return' possible? 	<ul style="list-style-type: none"> Mid-term to long-term Medium priority
Social aspects	<ul style="list-style-type: none"> How can the project be used to enable a socially just electricity supply? 	<ul style="list-style-type: none"> Mid-term to long-term High priority

5.1.4. Matrix of Actionable Questions

Questions	Why is this important?	Who and what is needed to find an answer?	Who will take action?
Are potential sites available? What are the requirements for a potential site?	The site determines what kind of project can be implemented. In a densely populated country such as Germany, site acquisition is a major barrier to the implementation of innovative energy projects such as Energy Gardens.	TMUEN (Thuringian Ministry of Environment, Energy and Nature Conservation) is currently working on a cadastre/registry that contains contaminated sites and former landfill sites. Under certain conditions, such sites may be used to implement an Energy Garden as they offer a possibility to renaturate such areas and open them to the (local) public.	TMUEN and ThEGA
Which RES technology can be used in addition to PV?	Open space PV can satisfy a certain amount of energy demand, but additional RES plants can improve the economic viability of the project.	The wind energy option represents a possibility in Thuringia. However, acceptability and administrative barriers still represent a challenge. Therefore also other alternatives, e.g. the usage of biogas based on the residues from landscape management or perennial energy crops (e.g. energy grasses) should be considered.	Local stakeholders, NGOs, municipality, farmers, agricultural enterprises, landscape management organisations and associations

<p>Who are potential members/ participants/ customers?</p>	<p>The legal form chosen and economic viability depends on the actors that participate in the project. (Municipality, residents, SMEs, municipal multi utility companies, environmental NGOs etc.)</p>	<p>The local stakeholders can be instructed by federal state actors, but a solution needs to be found in a bottom-up manner, as indicated by the participants of the workshop.</p>	<p>Local stakeholders (instruction by federal state actors and state-wide networks)</p>
<p>Which investments are necessary? Which sources are funding are available and suitable?</p>	<p>Risk capital needs to be acquired, otherwise the project cannot be initiated.</p>	<p>Different funding mechanism work differently and have different aims and prerequisites. Those need to be considered to gain insights which mechanism work best and are in line with the project aims (e.g. social acceptability and renaturation).</p>	<p>Local stakeholders (instruction by federal state actors and state-wide networks)</p>
<p>Which legal form is suitable?</p>	<p>The legal form determines how capital can be acquired and how participation can be organised.</p>	<p>The legal form has to be determined by local stakeholders and the municipality involved.</p>	<p>Local stakeholders (instruction by federal state actors and state-wide networks)</p>
<p>How can the ownership be designed to enable efficient decisions?</p>	<p>Ownership and the legal form of the project are deeply intertwined. A badly chosen form of ownership can endanger acceptability and result in the cancelation of the project.</p>	<p>Ownership models can be designed in participatory formats, although this might require more investments in the initial phase.</p>	<p>Local stakeholders (support by federal state actors and state-wide networks)</p>
<p>Which forms of dialogue/ participation are necessary (to increase acceptability)?</p>	<p>Many wind energy and open space PV projects show that local actors have the potential to stop or hinder the realisation of a project. As RES projects are bottom-up projects they are best implemented by relying on the local population and by empowering them to decide if and how they want to implement a RES project. As a general rule, all local stakeholders should be involved from the very beginning, already in the early</p>	<p>The Dutch example has shown that Value Mapping and Co-Design are trustworthy formats and suitable to empower local stakeholders and municipalities.</p>	<p>Local stakeholders (support by federal state actors and state-wide networks)</p>

	planning stage, in the design process, and development of the project		
How can the local community be integrated in the initial phase? How can the participation techniques from the Dutch Energy Gardens be transferred to Thuringia – and are those techniques suitable for Thuringia?	See above	The methods employed in the Dutch case can be transferred to Thuringia. How local stakeholders react to those aspects and possibilities remains to be seen, tested and (if necessary) adjusted.	Local stakeholders (support by federal state actors and state-wide networks)

5.2. Spain-Spain Transfer

5.2.1. Agenda of transfer workshop on 6th of October 2022 on Tenerife

Time (local)	Activity	Participants
Introduction to the 2nd Transfer Workshop		
9:30-9:40	Opening and welcome	Víctor García, Cabildo de Tenerife
9:40-9:50	Transfer activities in the framework of COME RES	Nicoletta del Bufalo (ECORYS)
9:50-10:00	Introduction to the workshop and participants	Xenia Gimenez (ACER)
10:00-10:20	Idea, concept and planning of the transfer process	Irene Alonso (ECORYS)
10:20-10:30	Questions & Answers	All
10:30-11:00	Learning lab (Part I): Analysis and validation of preliminary recommendations <i>(Moderación: Nicoletta del Bufalo, ECORYS)</i>	All
11:00-11:30	<i>Coffee break</i>	
11:30-13:00	Learning lab (Part II): Transfer Roadmap (definition of short-term actions and future cooperation) <i>(Moderation: Irene Alonso, ECORYS)</i>	All
13:00-15:00	<i>Lunch and transportation to El Rosario</i>	
Technical Visits to Renewable Energy Communities in Tenerife		
15:00-16:00	Visit to “El Rosario Solar” REC	All
16:00-16:30	<i>Transportation to Tacoronte</i>	
16:30-18:00	Visit to Tacoronte REC	All
18:00	<i>End of day</i>	

5.2.2. Recommendations & Questions for Systemic Innovation of the Transfer

Recommendations	Questions for systemic innovation
Expanding the learning region’s participants knowledge of COMPTM’s business model and explore its transfer / adaptation to RECs in the Canary Islands, particularly considering the following aspects of this model:	<i>Is it feasible for the RECs in the learning region to be both producers and traders? What are the advantages/ disadvantages of this model? Is it desirable that all members are contracted for supply with the REC? How can the learning region’s RECs implement the “as a service” model,</i>

<ul style="list-style-type: none"> • The REC acting both as energy producer and trader • All prosumers to contract their supply with this trader, • The self-consumption installations to be used by the prosumers but are the property of the cooperative • The "As a service" model^[1]: The cooperative makes the initial investment. 	<p><i>including the exemption of initial investments by REC members? What could be done to simplify / reduce costs of the REC management?</i></p>
<p>Exploring in more detail the energy sharing model of the COMPTTEM project for its transfer to the Canary Islands' RECs. In particular, the focus should be in the collective self-consumption model (with/without surplus and compensation).^[2]</p>	<p><i>What adjustments could be made to adapt the self-consumption with surplus simplified compensation model to the energy communities in the Canary Islands? Can municipalities involved in the REC use a larger share of the energy produced?</i></p>
<p>Municipalities to expand their knowledge of / cooperation with RECs and, in particular, the legal and administrative formulas for the transfer/use of public spaces by RECs (e.g. through the formulas of authorisation or concession of public property, in Spanish, "concesión demanial"^[3]). In particular, the creation of a guide on energy communities for municipalities is recommended.</p>	<p><i>What are the advantages/disadvantages of COMPTTEM's cooperation model (public space leasing), and how could it be adapted to the reality of the Canary Islands?</i></p>

5.2.3. Matrix Categorization of Questions

Category	Questions	Priority (in time)
<p>Governance structures</p>	<ul style="list-style-type: none"> • What could be done to simplify / reduce costs of the REC management? 	<ul style="list-style-type: none"> • Short-term
<p>Legal forms</p>	<p>-</p>	<p>-</p>
<p>Activities in energy market/business models</p>	<ul style="list-style-type: none"> • Is it feasible for the RECs in the learning region to be both producers and traders? What are the advantages/ disadvantages of this model? 	<ul style="list-style-type: none"> • Not a priority • after collectively weighing advantages and disadvantages of becoming an energy trader. Mainly, it is currently not considered to be a profitable activity, as the REC would have to compete with other renewable energy market actors who offer lower

		energy prices. Moreover, the financial risk to which the municipality would be subject is too high. It could work but it would have to be with a well thought out prior study in order to have guaranteed future prices.
	<ul style="list-style-type: none"> Is it desirable that all members are contracted for supply with the REC? 	<ul style="list-style-type: none"> Not a priority It is recommended that free choice of energy supplier is maintained.
	<ul style="list-style-type: none"> How can the learning region's RECs implement the "as a service" model, including the exemption of initial investments by REC members? 	<ul style="list-style-type: none"> High priority (short term)
	<ul style="list-style-type: none"> What adjustments could be made to adapt the self-consumption with surplus simplified compensation model to the energy communities in the Canary Islands? 	<ul style="list-style-type: none"> Priority (mid-term)
	<ul style="list-style-type: none"> Can municipalities involved in the REC use a larger share of the energy produced? 	<ul style="list-style-type: none"> High priority (short-term)
Cooperation models	<ul style="list-style-type: none"> What are the advantages/disadvantages of COMPTM's cooperation model (public space leasing), and how could it be adapted to the reality of the Canary Islands? 	<ul style="list-style-type: none"> High priority (short term)

5.2.4. Matrix of Actionable Questions

Questions	Why is this important?	Who and what is needed to find an answer?	Who will take action?
How can the learning region's RECs implement the "as a service" model, including the exemption of initial investments by REC members?	This model is considered particularly useful at the early stages of the REC implementation. It can increase social acceptance by eliminating a key entry barrier: the need for an individual initial investment. As such, the model has the potential to boost citizen participation, including vulnerable groups.	For this model to work in the learning region, each REC (the legal entity) must assume the initial investment, possibly by leveraging resources through a financial institution, usually of ethical nature, or by harnessing public funds / grants. This way, it is assured that the legal entity itself (be it an association, cooperative, or else)	Stakeholders from the learning region, together with COMPTM.

	<p>Moving forward, REC members will pay for the energy they actually use, allowing for a fair distribution of costs. This said, the energy distribution criteria will be established in a solidarity-based manner, optimising the overall economic returns for the community.</p> <p>Importantly, the investment is self-financed over time through the economic savings generated by the installation itself.</p>	<p>becomes the manager of the REC.</p> <p>The “As a service” model has a handicap, however: the charge for the “theoretically” free energy should be invoiced bearing a VAT, according to the tax authorities. This means that it takes a little longer to recover the investment.</p> <p>Participants in the learning region mentioned the need for additional professional advice and/or capacity building services to bring this model forward in their own projects.</p>	
<p>What could be done to simplify / reduce costs of the REC management?</p>	<p>RECs from the learning region, which are currently in their early planning or inception phases of development, struggle with adequately resourcing the management aspects of the REC (i.e. staff), mainly because their business model isn't fully deployed and in operation yet. This means that the REC mostly relies on volunteer work during its inception phase. A simplification of the administrative procedures which need to be undertaken by the REC promoters at its early stages of development would contribute to mitigating this. In doing so, it is very important to engage with the relevant local and regional authorities, who can play a key role in the development of support/advisory packages specifically tailored for RECs. These may include services ranging from legal/administrative advice, project conceptualisation and development support, or communication and awareness-raising activities.</p>	<p>To overcome the (lack of) staff resources, expertise and knowledge, it is suggested that the creation of a network of RECs facing similar challenges could be beneficial so as to sharing costs and creating synergies. This network would also address funding models and monitor legislative developments affecting REC development.</p> <p>In parallel, it is considered useful to develop a standard (regional) protocol informing the creation an open source platform for metering individual consumption in a single portal, which would simplify management procedures (including invoicing) for RECs based in collective self-consumption models.</p>	<p>The regional energy offices / agencies to play a key role in dynamizing and providing support to this network.</p>

<p>Can municipalities involved in a REC use a larger share of the energy produced?</p>	<p>Some municipalities in the learning region are currently experiencing serious problems to afford energy due to the energy crisis and the dramatic increase in electricity prices. This will heavily impact local spending capacity in the short and midterm.</p>	<p>It is considered essential to work towards municipalities' energy self-sufficiency, particularly through their involvement in a renewable energy community.</p> <p>Stakeholders from the REC El Rosario Solar propose channelling a larger share of the</p> <p>In this regard, stakeholders in the learning region expressed the need for clear political will from the local governments, making sure they understand the benefits of participating in a REC.</p>	<p>Stakeholders from El Rosario Solar</p>
<p>How could COMPTM's model of cooperation with municipalities (in particular the use of public space) be adapted to the reality of the Canary Islands?</p>	<p>Stakeholders in the learning region observed a need to increase municipalities' knowledge of RECs and, in particular, the legal/ administrative formulas for the transfer/use of their public spaces by the REC. The formula of <i>demanial authorisation</i> and/or <i>concession</i> (See COME RES Deliverable 6.2) has been successfully tested within the COMPTM case.</p>	<p>Stakeholders in the target region suggested the need for a guidebook, especially designed for local governments, on legal models for cooperation with the transfer of public spaces. There are different resources available that can be relatively easily adapted to the Canary Islands reality.</p> <p>Participants in the learning region mentioned the need for additional professional advice and/or capacity building services to bring this model forward in their own projects.</p>	<p>Stakeholders from the learning region, together with COMPTM.</p>

5.3. Latvia-Italy Transfer

5.3.1. Agenda of transfer workshop on 6th of October 2022 in Riga

TIME	PROGRAMME
9:30	<i>Registration & Coffee. Networking.</i>
10:00	Welcome. The COME RES project at a glance <i>by Aija Zučika, Latvian Environmental Investment Fund (LEIF)</i>
10:10	Transfer activities in the frame of COME RES. Introduction to the workshop. <i>by Aija Zučika, Latvian Environmental Investment Fund (LEIF)</i>
10:30	Italian experience in the promotion, establishment and management of the renewable energy communities. The presentation of the transfer case: the concept and realisation of the first REC in Italy : Energy City Hall REC-1 in Magliano Alpi municipality Questions and answers. <i>by Gilda Massa, ENEA, Italy, on-line presentation in English</i>
11:10	Summary of the Transfer case: main elements (in Latvian) Presentation of the Group Work Methodology Questions and answers. <i>By Ivars Kudreņickis, Institute of Physical Energetics</i>
11:25	<i>Coffee (to be taken inside the group discussion)</i> <i>Room re-arrangement for two discussion groups</i>
11:30	Workshop: Group discussion. Development of the dynamic learning agenda by means of dynamic learning lab methodology <i>Moderation:</i> <i>Gundars Rēders (Latvia TV1 moderator)</i> <i>Aigars Štāls (representative of COME-RES Transfer team member)</i>
13:00	<i>Lunch. Networking</i> <i>The moderators summarises the results of the group discussion</i>
13:40	Presentations of group work results. <i>By moderators Gundars Rēders and Aigars Štāls</i>
14:10 -14.40	Concluding discussion with representatives of the Italian transfer case, <i>on-line, by Gilda Massa and Sergio Olivero (President of the Scientific Committee of the REC of Magliano Alpi)</i> <i>Moderated by Gundars Rēders</i> <i>Summary by Aija Zučika (LEIF).²⁶</i>

²⁶ Aija Zučika, on behalf of all Latvia COME RES team, "particularly **thanked partners in Italy**" for both warm welcome during the transfer visit in Italy and on-line facilitation of the today Transfer workshop. The transfer of the experience had provided the basis to see both how the enabling framework can be established for municipalities–driven REC and what practical steps municipalities should perform. This was particularly fruitful contribution to identify the relevant actionable questions in Latvia.

Aija Zučika thanked workshop participants for their highly active participation and expressed strong conviction on the fruitful cooperation in the final phase of COME RES and on that the municipality-driven REC will come in Latvia soon.

5.3.2. Recommendations & Questions for Systemic Innovation of the Transfer

Recommendation	Question for systemic innovation
<p>To increase interest and local support for the REC, the municipality shall create awareness among residents and take the active role in the first RECs.</p>	<p><i>Have the motivation factors of the particular municipality to establish or lead the establishment of the REC been clarified?</i></p> <p><i>What are the strengths of a municipality to promote the REC?</i></p> <p><i>Are there barriers for the municipality, due to Latvia's legal regulations, to participate in REC?</i></p> <p><i>What are the restrictions, if any, of the municipality to provide initial investments to start the operation of the REC?</i></p> <p><i>Are there restrictions for the municipality to invest in a REC that does not exclusively operate on the property of the municipality?</i></p> <p><i>Could the existing activities of local residents' communities be the platform to help the municipalities for REC development, particularly for members recruitment?</i></p> <p><i>For example, homeowners associations (established as the NGO), local LEADER group, „smart village“²⁷.</i></p> <p><i>Do municipalities see the REC as an instrument to meet climate change mitigation targets at the municipal level?</i></p> <p><i>Has the particular municipality designated the staff which can work on establishing the REC?</i></p>
<p>For the development of REC, it is necessary to ensure both expert support to the REC and communicate the REC in the local society as a whole</p>	<p><i>What are the needs of REC participants (including municipality ones) for increasing their knowledge and capacity?</i></p> <p><i>What, for the time being, are the possibilities (options) to provide such capacity building?</i></p> <p><i>What are the most appropriate channels to provide information and to communicate with REC interested participants?</i></p> <p><i>What information sources or/and institutions can provide the information regarding electricity consumption profiles of potential REC members?</i></p>
<p>The legal form of the REC shall be chosen taking into account various aspects.</p>	<p><i>Are all the legal forms stated by the Latvia's legislation on energy communities suitable for municipality participation in REC?</i></p> <p><i>What are the strengths, weaknesses and restrictions of various legal forms regarding the (i) planned business model of REC, (ii) type and diversity of REC members?</i></p> <p><i>Can the choice of REC legal form affect (limit) its potential benefits to members, the area covered, and the involvement of vulnerable groups?</i></p>

²⁷ The EU Action for Smart Villages initiative was launched by the European Commission in 2017. Smart Villages are communities which build on, and enhance their existing strengths and assets through creative thinking and by embracing innovation to create desirable places for people to live and work. Smart Village movement actively develops in Latvia and the representative of it participate in the Transfer Visit in Italy, June 2022.

<p>The start-up and sustainable operation of REC requires (financial) support at various stages of REC creation and operation</p>	<p><i>What is the capacity of the municipal budget to invest in the activities on REC establishment and operation?</i></p> <p><i>From the point of view of public procurement, are there any restrictions for the municipality to participate in an electricity production enterprise and to receive electricity supply without a procurement procedure?</i></p> <p><i>Have assessments been made on the positive impact of REC operation on reducing losses in the power system, and therefore on the economic validity of the possible reduction of some grid usage payments?</i></p> <p><i>Has a calculation been made regarding the REC operational expenditure-income balance, considering the current regulation in Latvia and the composition of potentially involved participants?</i></p> <p><i>What are the detailed conditions regarding REC participation in the solar PV technologies investment co-financing programmes?</i></p> <p><i>Could the development of a REC in Latvia take off in the near future without a state aid (support) programme?</i></p>
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5.3.3. Matrix Categorization of Questions

Category	Questions	Priority (in time)
<p>Governance structures</p>	<ul style="list-style-type: none"> • Have the motivating factors of the particular municipality to establish or lead the establishment of the REC been clarified?²⁸ • Has the particular municipality designated the staff which can work on establishing the REC? • What are the restrictions, if any, of the municipality to provide initial investments to start the operation of the REC? 	<ul style="list-style-type: none"> • Short term
<p>Legal forms</p>	<ul style="list-style-type: none"> • Are all the legal forms, stated by the Latvia's legislation on energy communities, suitable for municipality participation in REC? • What opportunities and restrictions could be depending on the legal form regarding the business model of REC and participation of different types of members? • Can the choice of REC legal form affect (limit) REC's potential benefits to its members as well as area and involvement of vulnerable groups? 	<ul style="list-style-type: none"> • Short term

²⁸ The general motivating factors have been identified within the TW. They are such as: the REC enables the municipality optimally use (self-consume, share, sell) the produced electricity; economic benefits (lower energy bills); production of green and fair energy; increase of energy supply security due to implementation of decentralised technological solutions; promoting development of remote rural areas and the municipal administrative territory as a whole; providing aid for vulnerable households (social function) and other social-type benefits; the REC is seen as the one of instruments to reach climate neutrality in the municipality. The important motivator might be also the availability of the financial support (investment co-financing) provided to the municipalities regarding the REC. At the same time for the particular municipality focus of the motivation may differ.

<p>Activities in energy market/business models</p>	<ul style="list-style-type: none"> • Have assessments been made on the positive impact of RECs operation on reducing losses in the power system, and therefore the economic validity of the possible reduction of some grid usage payments evaluated? • Has a calculation been made regarding the REC operation expenditure-income balance, taking into account the current regulations and the composition of potentially involved participants. • From the point of view of public procurement, are there any restrictions for the municipality to participate in an electricity production and to receive electricity supply without a procurement procedure? • What are the detailed conditions regarding the REC participation in the solar PV technologies investment programme co-financed by the ERDF?²⁹ • What information sources or/and institutions can provide the information regarding electricity consumption profiles of potential REC members? 	<ul style="list-style-type: none"> • Question 1: mid term • Rest: Short-term
<p>Cooperation models</p>	<ul style="list-style-type: none"> • Are there restrictions for the municipality to invest in a REC that does not exclusively operate on the property of the municipality? • Could the existing activities of local residents' communities be the platform to help municipalities for REC development, particularly for members recruitment? 	<ul style="list-style-type: none"> • Short term
<p>Other</p>	<ul style="list-style-type: none"> • What are the capacity of the municipal budget to invest in the activities on REC establishment and operation? • Do the municipality spatial plan (or other local/detailed planning document) maps the most accessible places for installing solar PV on the roof of public building, or municipality owned land? • What are the needs of REC participants (including municipality ones) for increasing their knowledge and capacity? • What, for the time being, are the possibilities (options) to provide such capacity building? • What are the most appropriate channels for providing information and communication to REC interested participants? 	<ul style="list-style-type: none"> • Question 3: mid-term • Rest: Short-term.³⁰

²⁹ ERDF (Latvia's EU Cohesion Policy Programme for 2021-2027) includes the measure to co-finance solar PV technologies (including storage equipment) investment and states energy communities as one of the beneficiaries. No more details available for the time being.

³⁰ In short-term the siting places for the start of at least one REC in the municipality shall be identified. Detailed evaluation is the task of the new municipal spatial planning documents, to be done in mid-term.

5.3.4. Matrix of Actionable Questions

Questions	Why is this important?	Who and what is needed to find an answer?	Who will take action?
Have the motivating factors of the particular municipality to establish or lead the establishment of the REC been clarified?	Principal goals and the expected benefits to be provided by the REC impact the activities and members selection of the REC	Opinion of the municipality Council and administration (relevant specialists), in consultation with local stakeholders	Municipalities, REC concept promoters: Latvian Rural Forum, Riga city Energy Agency (REA), Planning regions. IPE
Are all the legal forms, stated by the Latvia's legislation on energy communities, suitable for municipality participation in the REC? What restrictions could be depending on the legal form? Can the choice of REC legal form affect (limit) potential benefits to the area and involvement of vulnerable groups?	<p>The restrictions, if any, limit the municipality activities and municipality involvement type in the REC.</p> <p>The legal form might impact also the business model of the REC.</p> <p>The legal form might impact also the different stakeholders to be members of REC.</p>	<p>To advice municipalities - the methodological material regarding the establishment of municipal-level legal framework³¹</p> <p>The study on pro and cons for each of legal form.</p> <p>The particular provisions facilitating municipal participation should be included in the relevant governmental regulations, under preparation now.</p>	<p>Experts with legal expertise, particularly in municipal law</p> <p>Advisers of Latvia Union of Local Governments</p> <p>Riga city Energy Agency³²</p> <p>Ministry of Environmental Protection and Regional Development (MEPRD)</p>
Has the particular municipality designated the staff which can work on establishing the REC?³³	The appointed administrative staff shall have the adequate rights and duties to solve in due (short) time the practical issues regarding REC establishment.	<p>Appropriate placement of this position in the municipal administrative structure, adequate work duties-rights description.</p> <p>The municipal energy management</p>	Municipalities

³¹ Municipalities shall clearly argue the use of their property by other legal subjects or transfer of electricity, produced by municipality owned technologies, to other legal subjects. Thus, this municipal legal framework (municipal by-law) shall answer such issues as: (i) why the municipality provides/rents its property (land, public building roof) to the REC - to determine what purposes, particularly social ones, the REC will meet, (ii) a methodology shall be established that determines for what fee the municipality will rent its property, (iii) if the municipality is an owner of RES technologies, a methodology should be established at what prices the municipality will share electricity with other members of the REC, vulnerable households might be included applying a special tariff for them.

³² Representative of Riga city Energy Agency during TW expressed willingness to develop such methodological material.

³³ During the TW it was agreed that the authority of the municipality plays a crucial role, therefore the overall leadership for the REC establishment should be undertaken by the political leadership – mayor of the municipality

		systems (EMS) might be reconsidered taking into account the municipality participation in the REC	
Could the already existing local residents' communities be the platform to help municipalities within the promotion, members recruitment, establishment of REC?	These already existing local residents communities have the experience of joint actions	Opinions of local residents communities/ associations	Particular municipality communicates/consults with existing associations of local residents "Smart villages" movement in Latvia (Latvia rural forum) Homeowners associations
Have assessments been made on the positive impact of RECs operation on reducing losses in the power system, and therefore the economic validity of the possible reduction of some grid usage payments evaluated?	Promoting economic viability of the REC	Particular assessment to be done	DSO (SC "Sadales tīkls") Promoters: Public Utilities Commission (the Regulator), Ministry of Economics, active input by relevant stakeholders
What information sources or/and institutions can provide the information regarding electricity consumption profiles of potential REC members?	The principal task of REC is to join the consumers of different type having different consumption profiles	The information sources and data providers identified	DSO, Electricity traders
Has a calculation been made regarding the REC operation expenditure-income balance, taking into account the current regulations and the composition of potentially involved participants	Presents economic viability of REC	The first tentative calculation	Experts-consultants, Models developed by science institutions (universities) Models developed by IPE
What are the detailed conditions regarding the RECs participation in the solar PV technologies investment programme co-	Lack of clarity delays the REC development	Request to speed-up the detailed elaboration of this programme	Ministry of Economics, promoted by municipalities and interested stakeholders

financed by the ERDF?			
What are the capacity of the municipal budget to invest in the activities on REC establishment and operation?	Lack of clarity delays the REC development It might be expected that at least REC start (“soft”) phase ³⁴ could be promoted by municipal budget.	Finding (earmarking) the resources in the budget of the municipality	Municipality, with active involvement (proposals) of interested stakeholders Municipal Council as the adopter of municipal budget
What are the restrictions, if any, of the municipality to provide initial investments to start the operation of the REC? Are there restrictions for the municipality to invest in a REC that does not exclusively operate on the property of the municipality	Lack of clarity delays the REC development	Possibilities and restrictions to be studied Earmarking the resources in the municipal budget	Municipalities in cooperation with experts on municipal law Municipal Council as the adopter of municipal budget
Do the municipality spatial plan (or other planning document) maps the most accessible places for installing solar PV on the roof of public building, or municipality owned land?	Lack of clarity delays the REC development	Mapping to start at least one municipality-driven REC in the municipality Inclusion of solar PV siting plan as one of the thematic plannings of municipal planning documents.	Municipality specialists. External spatial planning specialists. Construction experts. ³⁵
What are the needs municipality specialists for increasing their knowledge and capacity? What, for the time being, are the possibilities (options) to provide such capacity building?	There is lack of knowledge and skills regarding practical issues of REC operation. Also skills to convince potential members to join the REC are highly important. Lack of knowledge, skills and non-adequate capacity promote the demotivation for the REC creation.	Identifying the needs List of institutions and relevant support programmes which can provide capacity building Promotion of establishment capacity development programmes	Ministry of Economics in cooperation with other relevant state authorities and relevant experts Activities of IPE, Latvian Rural Forum, REA, planning regions (financial) Support programmes which includes the activity of REC capacity building

³⁴ For instance, the development of REC concept and preliminary assessments; information & communication activities, recruitment of REC members, elaboration of REC statutes and other documents, etc.

³⁵ Construction experts shall evaluate to evaluate the technologies installation created loads and fastenings impact on the building structures and structural solutions of the roof.

<p>What are the most appropriate channels to provide information and to communicate with REC interested participants?</p>	<p>Well selected channels promote the interest in the REC</p>	<p>Identifying the best channels</p>	<p>Municipality specialists in cooperation with public relations experts, Local news issues, Local events, face-to-face contacts, Local institutions of municipal administration ³⁶, Cooperation with homeowners' associations etc.</p>
<p>From the point of view of public procurement, are there any restrictions for the municipality to participate in an electricity production and to receive electricity supply without a procurement procedure?</p>	<p>Lack of clarity delays the REC development</p>	<p>Identifying any restrictions. Advising municipalities. The methodological material to be published in the website and journal "Procurements" ³⁷</p>	<p>Municipality specialists in cooperation with experts on public procurement, state Procurement Monitoring Bureau, website and journal "Procurements"</p>

³⁶ The local municipalities (*novadi*) in Latvia is divided into smaller units – towns and rural territories (*pagasti*) which has administration units with the aim to ensure municipal services close to local residents

³⁷ <https://zumalsiepirkumi.lv>

5.4. Italy-Belgium Transfer

5.4.1. Agenda of transfer workshop on 6th of October 2022 in Roseto

TIME	PROGRAMME
9:15 -9:30	Registration & welcome coffee
9.30 – 09.45	Opening remarks <i>Lucilla Parisi Mayor of Roseto Valfortore</i>
9.45 – 10.00	Opening speech and presentation of the day's work <i>Gilda Massa (ENEA)</i>
10:00 -10:30	Energy Communities in Belgium: the experience of Ecopower <i>Margot Vingerhoedt (Ecopower)</i>
10.30 – 11.00	Belgian best practices and lessons learned <i>Virna Veneruci (Ecoazioni)</i>
11.00 – 13.00	Analysis of insights from the Belgian experience Challenges to be faced in Roseto Valfortore, Apulia
13:00-14:00	<i>Lunch break</i>
14.00 – 16.15	Actions to be taken in the Apulia region and implementation priorities Critical issues and opportunities Planning <i>Gilda Massa (ENEA) facilitator</i>
16.15 – 16.30	Final remarks and closure of work <i>Gilda Massa (ENEA) e Virna Veneruci (ECOAZIONI)</i>

5.4.2. Recommendations & Questions for Systemic Innovation of the Transfer

Recommendation	Question for systemic innovation
<p>1 Improve/strengthen communication with the DSO to make the authorisation process more transparent and less time consuming. To facilitate the authorisation process, access to relevant information and (high quality) data should be improved.</p>	<p><i>What are the main barriers for REC development? Can the authorisation process be considered as one of the main barriers?</i></p> <p><i>If authorisation process is not considered as one of the main barriers it is perhaps not that urgent to find a solution? And other barriers should be dealt with higher priority?</i></p> <p><i>How can the authorisation process be made more transparent and less time consuming?</i></p> <p><i>How and to what extent will an improvement of the communication between DSO and RECs contribute</i></p>

	<p><i>to a more transparent and swift authorisation process?</i></p>
<p>2. Act collectively instead of individually to create critical mass in dialogues with policy makers or DSO, and generate economies of scale by sharing knowledge and resources.</p>	<p><i>What is the added value of collaborating with other RECs?</i></p> <p><i>On what scale should this collaboration take place?</i></p> <p><i>Is there a need to set up a national/regional/local network of RECs?</i></p> <p><i>Is there a need to set up a regional/national federation of RECs?</i></p>
<p>3 Create specific expertise on the subject of RECs in the territories where the RECs are to be established.</p>	<p><i>Why should expertise on the subject of RECs be established?</i></p> <p><i>On what scale should this expertise be established (local/regional/national)?</i></p> <p><i>How can this expertise be established?</i></p>
<p>4 Keep track of changes in the legislative and social-economic context and adapt (engagement, communication) strategies if considered relevant. Use favourable contextual factors (such as Covenant of Mayors) as an enabler for RECs and engaging municipalities, local market actors and citizens in local RES projects.</p>	<p><i>Which factors can be seen as enablers for RECs?</i></p> <p><i>Only contextual factors?</i></p> <p><i>If contextual factors are not considered as (the only) key factors that have an impact on REC development, perhaps other factors (also) have to be monitored.</i></p> <p><i>Why do we have to monitor the key enablers for REC development?</i></p> <p><i>How should we monitor the key enabling factors?</i></p> <p><i>On what scale (national/regional/local) and how often (weekly/monthly/yearly/2-yearly) should these key enabling factors be monitored?</i></p>
<p>5 Report about the benefits/impacts of a REC and showcase success stories to build trust/support for local RES projects.</p>	<p><i>How can we increase trust and support for local RES projects?</i></p> <p><i>What are the most effective measures to build trust/support for local RES projects?</i></p> <p><i>To what extent will reporting about benefits/impacts and success stories have an impact on the trust and support?</i></p> <p><i>Is information about benefits/impacts and success stories readily available?</i></p> <p><i>How can this information be used to build trust/support for local RES projects?</i></p>
<p>6 Direct participation of citizens in the REC to minimize resistance and maximize added value for local community.</p>	<p><i>What is the added value of direct participation of citizens in a REC?</i></p> <p><i>How can citizens participate directly in a REC?</i></p> <p><i>How can direct participation of citizens in a REC be stimulated/promoted?</i></p>
<p>7 Clear vision of the municipality on implementation and future development of RES on its territory to create a stable, regulatory framework for local RES projects and increases trust in the local authority.</p>	<p><i>What is the added value of a clear vision on REC development?</i></p> <p><i>Who should be involved in defining such a vision?</i></p> <p><i>Which key elements should the vision encompass?</i></p> <p><i>What should be the geographical coverage and time horizon of this vision?</i></p>
<p>8 Start thinking about the organisational structure of the REC (e.g. controlling body, procedures, ICT integration).</p>	<p><i>Why do we want to set up an organisational structure? What is the added value?</i></p>

	<p><i>Who should be involved in defining the organisational structure?</i></p> <p><i>What are the minimum requirements of the organisational structure? How structured or organised do you want to be?</i></p> <p><i>Which functions, roles, processes should be part of the organisational structure?</i></p> <p><i>When do we want the organisation structure to be operational?</i></p>
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5.4.3. Matrix Categorization of Questions

Category	Questions affordable by transfer team point of view	Priority (in time)
Governance structures	<ul style="list-style-type: none"> • How can citizens participate directly in a REC? • How can direct participation of citizens in a REC be stimulated/promoted? 	<ul style="list-style-type: none"> • Short-term • Very High priority
Legal forms	<ul style="list-style-type: none"> • What are the main barriers for REC development? Can the authorisation process be considered as one of the main barriers? • If authorisation process is not considered as one of the main barriers it is perhaps not that urgent to find a solution? And other barriers should be dealt with higher priority? 	<ul style="list-style-type: none"> • Mid-term to long-term • High priority
Activities in energy market/business models	<ul style="list-style-type: none"> • Which factors can be seen as enablers for RECs? • What is the added value of a clear vision on REC development? • Who should be involved in defining such a vision? 	<ul style="list-style-type: none"> • Mid-term • Medium priority
Cooperation models	<ul style="list-style-type: none"> • Who should be involved in defining the organisational structure? • What are the minimum requirements of the organisational structure? How structured or organised do you want to be? • Which functions, roles, processes should be part of the organisational structure? 	<ul style="list-style-type: none"> • Mid-term • Medium priority
Other	<ul style="list-style-type: none"> • How can we increase trust and support for local RES projects? 	<ul style="list-style-type: none"> • Short-term • Very High priority

	<ul style="list-style-type: none"> What are the most effective measures to build trust/support for local RES projects? 	
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5.4.4. Matrix of Actionable Questions

Questions	Why is this important?	Who and what is needed to find an answer?	Who will take action?
<p>How can citizens participate directly in a REC?</p> <p>How can direct participation of citizens in a REC be stimulated/promoted?</p>	<p>The more citizens joining, the greater the benefits in terms of environmental protection, self-sufficiency, energy saving and the spread of renewables</p>	<p>Have the plants available and promote the concept of REC on the territory</p>	<p>REC of Roseto involvement of local stakeholders</p>
<p>How can we increase trust and support for local RES projects?</p> <p>What are the most effective measures to build trust/support for local RES projects?</p> <p>What is the added value of a clear vision on REC development?</p> <p>Who should be involved in defining such a vision?</p>	<p>Through an active role of the municipality that makes public surfaces available and shares the energy produced with REC members.</p> <p>The participation of the municipality in the REC fosters a sense of confidence about the value of the initiative.</p>	<p>The utility company that installs the panels and the municipality that makes the areas and energy produced available to REC members, joining as a REC member</p>	<p>Municipality of Roseto</p>
<p>What are the main barriers for REC development?</p>	<p>Regional regulations limiting the areas available for photovoltaic panel installation. Lack of qualified professional support figures at the local level.</p>	<p>Identification of suitable areas, dialogue with policy makers at the regional level in order to identify regulatory solutions compatible with the needs of RECs.</p>	<p>Mayor of Roseto , Valfortore policy makers.</p>
<p>Which factors can be seen as enablers for RECs?</p>	<p>Not having to make initial investment.</p>	<p>Private investor/ service company that invests its own capital in purchasing panels and then leases them to REC by providing for the recognition of a lease fee as a share of the bonus that is awarded to REC by the GSE (National Energy Service Management Company)</p>	<p>Friendly power (utility company), Citizen and stakeholders</p>

<p>Who should be involved in defining the organisational structure? What are the minimum requirements of the organisational structure? How structured or organised do you want to be? Which functions, roles, processes should be part of the organisational structure?</p>	<p>The organisational structure and business model are critical to the growth of the REC.</p> <p>The organisational structure sees the REC composed of citizens and municipality with the presence of an assembly, board of directors, president, secretary and treasurer.</p> <p>The REC holds leases, for a fee, the facilities owned by a service company which takes care of the operational aspects and maintenance.</p>	<p>The REC through the GSE bonus pays back the panel freight and at the same time has a profit that it can reinvest in new plants</p> <p>The same municipality as a REC member can also expect to reinvest the benefits of RECs in new projects such as e-mobility in addition to national funding</p>	<p>Municipality, REC members and utility company.</p>
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5.5. Template for a Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

COME RES Transfer Process

On the sharing of expertise on community energy

Introduction

COME RES supports the development of new RES-based community initiatives including RECs by encouraging context-based best practice transfers to “learning regions” within the partner countries. To this end, four learning regions were coupled to four mentoring regions – i.e., regions that host best practices deemed to be of particular relevance for a particular learning region. For each of these couples a transfer team was set up composed of participants from the learning region, the mentoring region, and experts from the COMERES consortium.

This “Memorandum of Understanding (MoU)” is an agreement shared among the participants of COME-RES learning and mentoring regions, whose purpose is to outline the measures to be exchanged and actions to be performed to share knowledge/expertise across the involved regions.

This Memorandum is not a legally binding document, but rather a means of showing commitment to the efforts towards the implementation of COME-RES’ overall objectives. We consider MoUs as a synonymous for a letter of intent that expresses an interest of the involved parties to perform common strategies or the intention of taking part in common activities which, however, are not legally binding for any party.

1. Overall aim

The transfer process aims to find tangible ways in which aspects of best practices in existing mentoring regions can be integrated in the learning regions. Implementation of the transfer activities in the learning regions is performed by the respective transfer teams.

Consistently with the transfer process some preparatory actions have been made:

- Selection of the measures (chosen from the COME RES good/best practices portfolio) to be transferred to the learning region;
- creation of transfer teams consisting of stakeholders and market actors from the mentoring/learning region and experts from the COME RES consortium;
- planning of short-term actions to undertake - with the support of the mentoring experts and the country desks of the learning regions – providing specific transfer concepts and a list of actions to be undertaken in order to integrate the transfer concepts into concrete policy/business models.

2. Commitment and Declaration

The Signatories welcome the cooperation in the frame of the project COME RES based on the principles of mutual respect and partnership.

We hereby reiterate the intent to engage with the COME RES project represented by XXX in the facilitation of the transfer process.

We recognize the importance of the overall objective of COME RES of advancing renewable energy communities in nine European countries learning from regions with advanced community energy development and supporting target regions with the potential to further develop energy communities.

The signatories commit to take part in the implementation of the COME RES transfer process and:

- declare their intention to transfer the concept of XXX developed in the Netherlands in an adapted form to XXX and to initiate steps for its implementation.
- make an effort to engage in the activities listed in the short-term planning document (Roadmap) developed during the transfer workshop
- aim to extend cooperation and sharing of knowledge and expertise beyond the short-term planning and the lifetime of the COME-RES project.

The documents referred to in the Memorandum of Understanding are attached in the Annex:

Roadmap, developed during the transfer workshop in XXX on XXX

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