



Deliverable 6.2

4 Capacity development and transfer workshops reports

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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.

ISSUES ADDRESSED AND MAJOR STEPS TAKEN

COME RES covers diverse sociotechnical systems including community PV, wind (onshore), storage and integrated community solutions that have been investigated across nine European countries. The project has a specific focus on such target regions in the 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 the political, administrative, legal, socioeconomic, spatial, and environmental characteristics, and the reasons for the slow deployment of RECs in selected target regions. COME RES synchronises the Project activities with the transposition and implementation of the Clean Energy Package and its provisions for RECs in policy labs. Policy lessons with validity across Europe will be drawn and recommendations proposed.

ABSTRACT

The EU legislation (RED II) provides a number of requirements on how greater citizen participation in the energy system should be facilitated. As a common denominator, EU legislation requires that community energy presupposes open, voluntary participation of citizens, small or medium enterprises and local authorities. Energy communities should be based on democratic principles, where control and decision-making are distributed among the members with the main objective to provide social, environmental or economic benefits for the local community. Member States are required to carry out an assessment of the barriers RECs are facing and the potential for their development, to ensure that they can compete with other market participants on an equal footing and to create an enabling framework for RECs. Additionally, it is necessary to take into account that the implementation of energy communities can be influenced by a broad variety of governance patterns that involve different combinations of (innovative) organizational and contractual arrangements, (local) identities and (common) interests¹. It is the combination of these factors in a particular setting that hinders or facilitates the successful creation of an energy community. Geographic, technological, demographic and cultural diversity in which a REC fits, combined with the factors mentioned above require more and more the search for adaptive solutions to contexts. The “enabling framework”, its incentives and preferential

¹ G. Baigorrotegui, J. Lowitzsch Institutional aspects of consumer (co-)ownership in RE energy communities J. Lowitzsch (Ed.), Energy transit. Financ. Consum. Co-ownersh. Renewables, Palgrave MacMillan (2019), pp. 663-702

conditions relying on Good Practices should as much as possible address these factors, allowing to highlight in each examined context opportunities and criticalities in advance.

The aim of the COME RES work package 6 (WP6) is to support the development of new RES-based community initiatives including RECs by encouraging context-based best practice transfers to the COME RES target regions or other “learning regions” within the partner countries.

WP6- the three main objectives:

- **Support the development of RECs** through a) capacity building for regional/local authorities and community stakeholders and b) by encouraging domestic and cross-country transfers of best practice concepts (Task 6.1 and Task 6.2)
- **Set up “learning labs”** for best practice transfer involving learning regions/communities and mentoring regions/communities (Task 6.3)
- **Support networking among existing RECs** and new ones through a platform providing guidance (Task 6.4).

The WP 6 has close feedback loops with WP3, WP4, WP5 and WP7.

This document (Deliverable 6.2 - 4 capacity development and transfer workshops report) has been prepared under WP6 of the COME RES project in the frame of Task 6.2 (Capacity development and training for public authorities and/or community stakeholders in the “learning regions”) and constitutes a general framework for capacity building and a useful support to the transfer experiments that will be part of Task 6.3 (Best practice transfer roadmaps). The COME RES learning regions are intended in the general definition set up by OECD 2 and adopted by the EU3, as not necessarily regions lagging behind but rather as territories that aim for continuous learning as the main pathway towards innovation and progress.

This report provides information on the transfer visits and training workshops undertaken by the transfer teams of the five learning regions set up in Task 6.1, to the country of origin of the 5 good/best practices chosen by each transfer team, from the COME RES good practice portfolio (Deliverable 5.2). These have been endorsed by the COME RES country desks, as those offering the best potential for transfer and adaptation to the specific legal, economic, governance and cultural contexts of the adopting regions.

Task 6.2 builds on the five transfer management plans, pre-assessed by the transfer teams of the learning regions as part of Task 6.1, which represent the general framework for the transfer roadmaps development to be conducted within Task 6.3. Task 6.2 supports the preparation, deployment, and post-event assessment of COME RES capacity development and training activities that will serve for the elaboration of transfer roadmaps envisaged within Task 6.3. The transfer roadmaps on the operational levels will contain proposals on how concepts/measures extracted from the chosen good/best practices will find adaptation in the adopting/learning regions.

² OECD (2002). Learning to Innovate: Learning regions, OECD Publishing, Paris

³ UNESCO (2012). Institute for Lifelong Learning. Global Learning Cities Network: Terms of Reference. Hamburg

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1 Introduction

Whilst there are many benefits stemming from Renewable Energy Communities, there are a number of challenges that can hinder their development. Notably, these include availability of leadership, skills and finance as well as the roles of regulation, the existing energy market, and cultural issues. As a first step to building a Renewable Energy Community shared model, those who are interested need gather together and co-operate to contribute to build a legal, administrative and management structure. Currently a large number of models and best practices, as emerged from the COME RES project, are available. However, to verify their effective transferability, it is necessary to develop a model and system for transfer and subsequent adaptation to the different local contexts. Through the transfer activities, Task 6.2 contributed to identify enabling and supporting frameworks for best practice transfer roadmaps (Task 6.3). Furthermore it disseminated best practices and know-how for local authorities, businesses, citizens and citizen organizations that wish to set up energy communities, in particular in COME RES countries that do not have (until now) a strong tradition of such initiatives.

1.1 Purpose of this document

Work package 6 initiates a transfer of feasible good/best practice measures including organizational forms, business models and financing instruments to target regions. Deliverable 6.2 presents the final outcomes of the transfer visits and capacity building activities carried out in the frame of Task 6.2 (“Capacity development and training for public authorities and/or community stakeholders in the learning regions”), held throughout June 2022. According to the Grant Agreement, Deliverable 6.2 (“Four capacity development and transfer workshops reports”) indicates the finalization of four reports (although this constitutes a minimum number, as the transfer regions could be more than four). During the project implementation, the COME RES partners opted to add up one additional region to the four learning regions indicated in the Grant Agreement (bringing consequently the number of the workshops and reports contained in Deliverable 6.2 from four to five). Two of the transfer visits were internal - inter-regional within the same country, (Poland to Poland; Spain to Spain) and 3 were transnational (Germany to the Netherlands, Italy to Belgium; Latvia to Italy). The five final reports have been elaborated by each of the transfer team set up for each of the five learning regions (DE-IT-LV-PL-ES) visiting the country of origin of the best/good practices identified in Task 6.1 and chosen from COME RES good practice portfolio (Del 5.2) as the most viable example for WP6 transfer experiments.

Deliverable 6.2 is organized into five section:

Section 1 summarizes and introduces the contents of the document.

Section 2 provides the methodological framework for capacity development/training workshops and peer assisted learning applications. This approach has already been experimented by the European Commission and other EU institutions to address complex multisectoral and multidimensional policy integration as the case of policies favouring decentralised energy production and RECs. It provides a general outline of the peer learning approach and its main rationale to facilitate cooperation and co-production among different stakeholders, views and interests, as in the case of RECs;

Section 3 describes how the methodological framework has been adapted to the COME RES project transfer

workshops. It presents the “Guidelines for the Transfer visits and Training Module” as a practical tool designed to facilitate the planning, launch and implementation of the transfer visits and the dedicated capacity building and training modules. The Guidelines contain a template of the Transfer report which constitute the core of the transfer activities. Furthermore, section 3 introduces the type of peer learning tool (matrix chart) and the guided questions used during the capacity building and workshop sessions in order to facilitate discussion and reach consensus over a set of shared recommendations to be used as a starting point for the transfer roadmap (Task 6.3).

Section 4 presents the five Transfer visits reports taken by the transfer teams in the five countries of origin of the best/good practices. It contains all the relevant contextual information and outcomes of the capacity building and peer learning sessions.

Section 5 provides the list of the “final recommendations” proposed by each transfer team in reference the good/best practice/s potential adaptation to the learning region, as the result of the peer learning exercise. Section 5 provides a more articulated review of the outcomes of the peer learning capturing recurrent issues and shared consideration emerging from the transfer reports, representing some cross-cutting issues of general interest for the transfer exercise. Both contributions constituting possible preliminary areas of discussion in the transfer experiments to be carried out in Task 6.3.

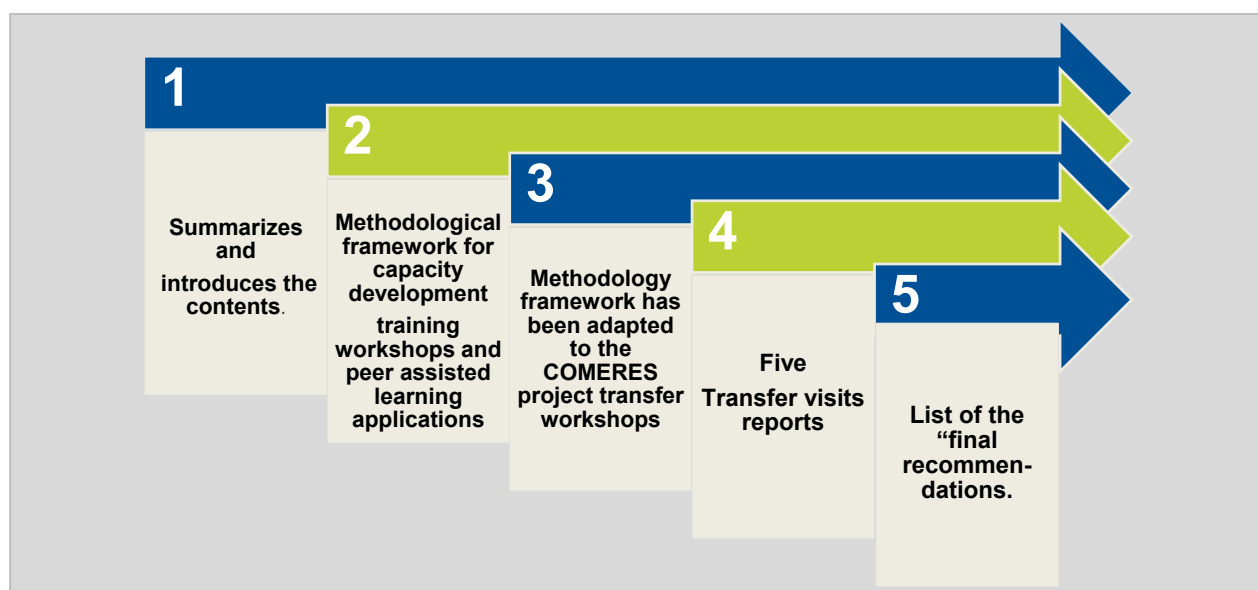


Figure 1: Deliverable 6.2 content organization

2 Methodological framework

Although over the last two decades many standardized technologies for decentralised renewable energy productions have flourished, their application cannot be simply taken as off-the-shelf products. This is neither a one-off process, but rather needs to be clearly adapted to local contexts (climate, type of buildings, type of urban conformity/design, etc) and to all those users' variables that, if taken into consideration, can empower citizens and effectively contribute to the energy transition.

At the EU-level, such variables reflect also the legal complexity behind a decentralised renewable energy policy framework, being the result of the multilevel governance (MLG) and the EU integration process of past three decades. In such a process, the role of public authorities as main policy facilitators is key to ensure wider community participation and REC multiple socio-economic benefits beyond mere economic advantages. To date, notwithstanding the progress in the implementation of the EU legal acquis as well as the realization of several RECs good/best practice experiments in Members States as highlighted by COME RES deliverable 5.2, much remains to be done in terms of capacity building and training of the various public actors/institutions.

This is in view to enhance a local policy framework and set viable conditions for new context-specific cooperation models. This is further stressed by the RED II enabling framework whereby one of the key minimum elements that Members States have to consider in the transposition and implementation of the Directive to accelerate RECs uptake, is the regulatory and capacity-building support to public authorities in enabling and setting up renewable energy communities, and in helping authorities to participate directly.

The COME RES project specifically recognises peer learning as a powerful tool to assess potential and gains from the integration of complex multi-sectoral and multidimensional policies, such as the case of decentralised energy production and renewable energy communities, through promoting and actively engaging with stakeholders.

The methodological framework used in task 6.2 takes into consideration the recent practical peer learning applications beyond education and academia, developed by the EC and other relevant European institutions. These are to establish sustainable integrated responses and new cooperation models to meet new challenges and achieve complex policy integration in cohesion policies and regional development, thus expanding peer learning potential and impact⁴.

More specifically, the approach and tools (i.e. guided questions/matrixs) used for the transfer visits and for the workshops format presented below and more in depth in section 3, make a general reference to URBACT III⁵ main experiments on capacity building using peer learning tools for the transfer of best practices⁶.

This methodology allows local communities to work with key stakeholders and provide effective training to improve the administrative capacity of municipal officials.

⁴ EUROPEAN COMMISSION, Directorate-General for Regional and Urban (December 2020) Policy Study on peer learning tools for the administrative capacity building of Member State bodies involved in the management of funds from the ERDF and the Cohesion Fund Final Report. Luxembourg: Publications Office of the European Union, 2021

⁵ <https://urbact.eu/urbact-glance>

⁶ <https://urbact.eu/toolbox-home>

The main idea behind peer learning approach is that, in order to support local communities effectively, communication must motivate the receiver to actively attend to messages and perceive and interpret the content that is provided by peers. This includes iterative and transactional solicitation of feedback, and activate elaboration of message arguments and counterarguments to encourage individuals to move through the process of learning. Peer learning is possibly one of the oldest forms of collaborative and connective learning in human society, affording people the chance to learn from the knowledge and experience of those similar to themselves. At its broadest, peer learning can be defined as individuals of equal or comparable status helping each other to learn and learning themselves in both formal and informal ways. Peer learning should be mutually beneficial and involve the sharing of knowledge, ideas and experience between the participants. In addition, a peer learning situation is free of hierarchies.

A peer learning situation generally is experienced as more relaxed, more motivating, less stressful and more attractive to the participants⁷.

Box 1 Below provides a short outline of the capacity development/training workshops format using peer assisted learning. They were followed by the five transfer teams set up for the five learning regions in task 6.1 to plan and deliver the transfer visits and transfer workshops. Their final outcomes, made in the form of recommendations, constitute a starting point for the transfer roadmap experiments envisaged in Task 6.3.

⁷ Boud, D. (2001). Making the move to peer learning. In Boud, D., Cohen, R. & Sampson, J. (Eds.) (2001). Peer Learning in Higher Education: Learning from and with each other. London: Kogan Page (now Routledge), 1-20 (PDF) Making the Move to Peer Learning. Available from: https://www.researchgate.net/publication/309967818_Making_the_Move_to_Peer_Learning.
Bergman, O. (2015). Peer Learning and Peer Feedback, KTH Royal Institute of Technology Jan 27 2015 Available from: <https://www.kth.se/social/group/guide-to-challenge-d/page/243-peer-learning-and-peer-feedback/>

Box 1: Outlines of the learning for capacity building and training workshops used in COMERES

Being flexible in structure, peer learning can be used in a variety of contexts and disciplines as a “quick-to-the-point” tool to generate new knowledge and coproduce shared outcomes.

Participants might have different background or level of expertise on a given topic, but the process is open and favours an exchange on an equal footing, facilitating reciprocal learning even on complex issues where for example different legal, normative, and economic aspects are to be integrated and shared among participants.

The key objective of peer-learning is the transfer of knowledge, skills and experience from a group of stakeholders to others. This can entail technical assistance to solve specific common challenges, benchmarking to inspire change, or other forms of peer support. During a peer-learning event, participants listen actively and share their stories, knowledge, and experiences.



Fig 2: Reasons why you need a peer-to-peer organization ⁸

As with most participatory and co-production formats, sound preparation is recommended by the methodology, to encourage an open process whose success depends largely on the ability to anticipate problems and formulate guided questions, to foster exchange on an equal footing, and finally to facilitate mutual learning even on complex issues where, for example, various legal, regulatory and economic aspects must be integrated and shared among participants.

⁸ Wooll, M. (2021). How to implement peer to peer learning in the workplace (BetterUp Blog) June 10, 2021. <https://www.betterup.com/blog/peer-learning>

3 Adapting the methodological framework to the COME RES project transfer workshops

Adaptation, a key concept in implementation, has been defined as a process of thoughtful and deliberate alteration to the design or delivery of an intervention, with the goal of improving its fit or effectiveness in a given context.⁹ It is a form of modification, which is a broader concept that encompasses any changes made to interventions, whether deliberately and proactively (adaptation), or in reaction to unanticipated challenges that arise in a given session or context.¹⁰

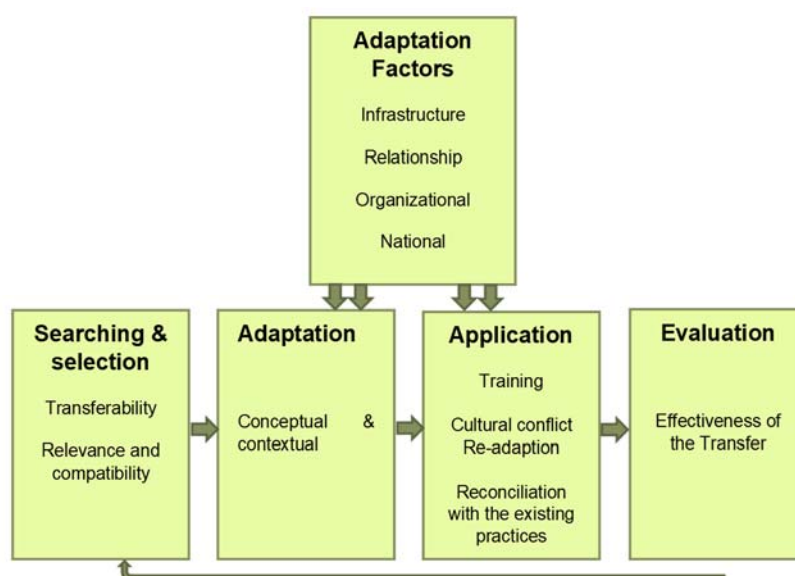


Figure 3: Recommended Best Practices Adaptation Steps¹¹

As a general indication for transfer visits and training workshops, the main elements for adaptation of peer learning were drawn upon and motivated by the following issues:

- Analyse how the good practices selected from the COME RES portfolio represent the basis of the peer exercise.
- Provide details on elements/measures identified for each chosen good/best and how peer to peer will effectively enhance a valuable and effective knowledge exchange.
- Consider the role of the visits as ways to better enhance or complement the knowledge exchange or the generation of new knowledge by the recipients.

⁹ Stirman SW, Gamarra JM, Bartlett BA, Calloway A, Gutner CA (2017). Empirical examinations of modifications and adaptations to evidence-based psychotherapies: methodologies, impact, and future directions. Clin Psychol Sci Pract. 2017;24(4):396–420. Stirman SW, Gutner C, Edmunds J, Evans AC, Beidas R.(2015). Relationships between clinician-level attributes and fidelity-consistent and fidelity-inconsistent modifications to an evidence-based psychotherapy. Implementation Sci. 2015;10(1):115.

¹⁰ Barrera M, Berkel C, Castro FG. (2017). Directions for the advancement of culturally adapted preventive interventions: local adaptations, engagement, and sustainability. Prev Sci. 2017;18(6):640–8. Cooper BR, Shrestha G, Hyman L, Hill L.(2016). Adaptations in a community-based family intervention: replication of two coding schemes. J Primary Prevent. 2016;37(1):33–52.

¹¹ Source of Figure 3: Fasika Bete, G., Thoben, K. D., Seifert, M.(2013) Implementing the SCOR Model Best Practices for Supply Chain Improvement in Developing Countries". International Journal of u- and e- Service, Science and Technology Vol. 6, No. 4, August, 2013.

As such, the structure of the training workshops was designed on three main phases:

1. Evidence of the elements to be transferred.
2. Direct experience (through visits) of the solutions adopted and comparison with local actors (local REC promoters/stakeholders/authorities).
3. Capitalization through peer comparison of the elements useful for the transfer (and for a subsequent transfer strategy).

3.1. Transfer visits and training modules (guidelines)

The Guidelines **for transfer visits and training modules** (hereafter in guidelines) together with the “transfer workshops reports template” prepared in May 2022 by the 6.2 task leader (Ecoazioni) aims to provide the project partners and transfer teams identified Task 6.1 with important tools for applying the methodology used in the COME RES project.¹² They represent a practical guidance and methodological pathways for the planning, launch and implementation of the transfer visits and the dedicated capacity building and training workshops (hereafter transfer activities) envisaged in Task 6.2.

The guidelines were based to a large extent on the indications set in the Grant Agreement. They have been further detailed during the KoM of task 6.2 held on 8/4/2022, in so far serving as a preparation, realization and post-event assessment tool of the transfer activities running respectively from M20 to M21 (preparation: April-May 2022), all across M22 (event realization: June 2022) and from M23 to M24 (post event assessment: July – August 2022). All the above steps were essential to systematically collect contributions by Task 6.2 participants and specifically transfer teams, for this Deliverable 6.2 “due in M25.

In the document, it is explained how the transfer modules have to be carried out by using the peer assisted learning methodology. Particular emphasis was placed on a sound preparation of the transfer teams and equipping the facilitators far in advance of the transfer visits. Moreover, it was reminded that the exercise would and should provide important insights for Task 6.3 “Best practice transfer roadmaps”.

The guidelines are structured in 3 main parts:

PART I - GENERAL INTRODUCTION, aimed primarily to present the links between tasks 6.1, 6.2 and task 6.3, as well as the general and detailed timelines of WP6 overall.

PART II – TRANSFER VISITS AND TRAINING MODULES, provided a detailed guidance and methodological pathways for the planning, launch and implementation of the transfer visits and the dedicated capacity building and training modules with reference to the following aspects:

- *The peer learning methodology for capacity building and training workshops*
- *Main steps of the peer learning approach used for the transfer modules*
- *Additional practical information on composition transfer teams, agenda setting/templates, logistics and privacy issues.*

¹² COME RES WP6 Task 6.1. “Establishing transfer team and transfer management plans for learning regions”

PART III - WORKSHOPS REPORT TEMPLATE, provided a detailed template (ANNEX 1 of this document) to support the workshop preparation and representing an ex-post assessment tool whose contents constitute a relevant part of Deliverable 6.2 overall presented in section 4 of this document.

3.1.1 Planning, launch and implementation of the transfer visits and the dedicated capacity building and training modules

COME RES seeks to encourage transfers of good/best practice measures to “learning regions” serving as “learning laboratories” taking appropriately into account their specific economic, social, political and cultural contexts. The COME RES transfer approach encompasses transfer visits, trainings, transfer workshops and validation exercises. On an operational level, transfer teams incl. mentoring experts will elaborate, i.a. transfer roadmaps including proposals how the corresponding concepts/measures can be accommodated in the adopting region. Part I (general Introduction) and Part II (transfer visits and training modules) of the guidelines have equipped partners and transfer teams with all the information they needed to initiate and manage transfer visits as well as the dedicated capacity building and training modules. Table 1.1 below combines the information provided in Deliverable 6.1 completed in M20, showing the five learning regions and the transfer elements/measures of the good/best practices that were to be part of the capacity and training activities of Task 6.2. These elements/measures were selected by the transfer teams based on recommendations by the respective Country Desks, and further detailed from the general four characteristics indicated in the Grant Agreement: a) governance structures including gaps in the national transposition of the EU directives; b) legal forms; c) Business models; d) cooperation models and financial participation possibilities for local authorities in good/best practices. The additional particulars took into considerations the criteria elaborated within WP5 including, inter alia, inclusiveness, innovativeness, model character, feasibility, transferability, and the extent to which the good/best practice cases provide environmental, economic, or social community benefits.

Table 1: Overview of the learning regions, the good/best practices and the specific elements/measures selected for capacity and training activities

No.	Partner country	Learning regions	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
1	Germany	Thuringia	FUB	1. Community virtual power plant (cVPP) Loenen (the Netherlands)	Referring to a): <ul style="list-style-type: none"> - transposition of RED II, particularly definitions and rights of RECs collective self-consumption, P2P-trading, energy sharing - implementation of energy sharing and collective self-consumption as defined in REDII - enabling framework for RECs and support scheme designs

					<p>Referring to b)/c):</p> <ul style="list-style-type: none"> - new business models for energy cooperatives and other community energy initiatives including energy sharing, virtual power plants, sector coupling <p>Other issues to be discussed:</p> <ul style="list-style-type: none"> - Good Practice case “Citizen wind farm De Spinder” (e.g., barriers, acceptance raising measures) - Best Practice case “Energy Gardens”: synergies of ground-mounted PV and biodiversity protection.
2	Italy	Apulia	ENEA	1. Ecopower (Belgium)	<p>Referring to a):</p> <ul style="list-style-type: none"> - governance structure and rules - enabling framework for RECs and support scheme designs <p>Referring to b)/c):</p> <ul style="list-style-type: none"> - business models for energy cooperatives and the rules of communication channel and the key activities and resources in place to connect wind and solar power.
3	Latvia	Latvia	LEIF	1. Energy City Hall REC-1 (Italy)	<p>Referring to a):</p> <ul style="list-style-type: none"> - transposition of RED II, particularly definitions and rights of RECs collective self-consumption - enabling framework for RECs <p>Referring to b)/c):</p> <ul style="list-style-type: none"> - new business models for energy cooperatives and other community energy initiatives.
5	Spain	Canaria Region	ECORYS ES	1. COMPTTEM Cooperative Enercoop (Spain)	<p>Referring to c):</p> <ul style="list-style-type: none"> - business model and financing of the installation through a loan that will be repaid through members’ rebates on the energy bill <p>Referring to d):</p> <ul style="list-style-type: none"> - participation of local authorities that have donated unused municipal land for the installation of the facility
<p><i>Legend of the transfer elements/measures:</i></p> <p><i>a) governance structures including gaps in the national transposition of the EU directives; b) legal forms; c) business models; d) cooperation models and financial participation possibilities for local authorities in RECs.</i></p>					

Along with transfer elements/measures and the additional details envisaged, training modules included specific information on the RED II transposition and capacity-building activities to understand the legal and regulatory framework set forth by Members States to support local communities and to take direct initiative in establishing good/best practices.

Table 2 below provides an overview of the time schedule of the transfer activities by the five learning regions, during M22 (June 2022).

Table 2: Time schedule for the implementation of the transfer visits in M22 on the part of learning regions (the indicated dates include travel to and from the destination)

N	Activity	Responsibility	Dates
1	Spain domestic Transfer visit and Training Module	Hosted Partner in collaboration with local Partner	28 - 29 of June 2022
2	Italy Transfer visit and Training Module in Belgium	Hosted Partner in collaboration with local Partner	7 – 9 June 2022
3	Poland domestic Transfer visit and Training Module	Hosted Partner in collaboration with local Partner	21 - 23 June 2022
4	Latvia Transfer visit and Training Module in Italy	Hosted Partner in collaboration with local Partner	27 - 30 of June 2022
5	Germany Transfer visit and Training Module in Netherlands	Hosted partner in collaboration with local partner	28 - 30 June 2022

Legend:

- Hosted Partner - Members of the consortium from the learning region
- Local Partner – consortium members of the country of origin of the good/best practice
- TT – transfer team

Following a map of the transfer visits by the learning regions.



Figure 4: Transfer Visit model

3.1.2 The Peer Learning Methodology for capacity building and training workshops

The peer learning provides a flexible structure and has been used in a variety of contexts and disciplines by many countries. The transfer Team (peers' group) follows a structured and well-defined procedure for assessing the performance of the host region (model region) and the application of good practice in its context. It starts with a thorough desk review of the good practices selected to seek elements of convergence or critical issues. Once the evidence is put together, the transfer team draws conclusions about the good practices performance and suggests recommendations to help strengthen its energy and climate policies in the learning region. A peer-to-peer approach, as used for transfer visits and training modules in COME RES, is not just an appraisal method. It is also a process of peer-to-peer learning and exchange of experience. Peers not only assess the performance of the good practice presented, but also share their experience and know-how while they bring back to their region new knowledge and skills.

Although the activity carried out within the task 6.2 is predominantly focused on supporting the learning region, and as such requires substantial time and effort from the individuals of those territories, there are many benefits for peers as well. By comparing different contexts also in the host region, the peers gain a deep understanding of the main drivers, challenges and solutions of the local climate policy, which can help them to further improve their own work back home. Furthermore, as the peers present and discuss their own experiences during the visit, they might also get relevant feedback.

The peer learning approach, adapted to the COME RES project, consists of four main steps:

1. **Analysis of the needs of the recipients** (learning region). The needs had to be expressed in relation to the elements and measures to be transferred further detailed for each transfer case, with those aspects of particular interest and potential adaptability identified by the transfer teams and presented in Table 1.1.
2. **Assessment of what could feasibly be taken on from the experience of the good/best practice** of the country of origin presented, considering the main barriers that the learning regions may encounter, as preliminarily indicated in Deliverable 6.1, section 4. "Transfer management plans", by each learning region.
3. **Assessment of the possible overcoming solutions as the result of the lesson learned** from the best practice that could prove viable at most in terms of adaptability and transferability potential of the good/best practice in the recipient territory.
4. **For each measure/element of the good/best practice/s, identification of a set of preliminary recommendations** that the transfer team could formulate as part of the capacity exercise, and that could be later used within Task 6.3 when setting the transfer roadmaps during the transfer workshops per transfer case, using a "learning lab" methodology.

To effectively manage an open participatory activity, practical instructions were given for identifying and defining of the role of facilitators, whose contribution to the finalization of the transfer reports of Deliverable 6.2 would be particularly important. As such, it was recommended that the role of facilitators should be taken on by an expert member of the consortium as well as one representing the region of

origin of the best/good practice.

These combine a good understanding of the needs/barriers/expectations of the learning region. Box 2 below explains the facilitator's main role and tasks that had to be met to ensure ownership of results on the part of the different participants, and hence, a successful finalization of the capacity building and transfer workshops.

It was strongly advised that members of the consortium partner of the country of origin (*hereafter hosting PP*) together with members of the consortium from the learning regions (*hereafter hosted PP*), identified far in advance two rapporteurs - respectively one member for each organization – who in close cooperation with facilitator would oversee the peer learning activity and take the direct responsibility for the finalization of the transfer reports. In any case and when deemed useful, it was left to the transfer team to decide whether **the role of facilitator** could be taken on also by one of the rapporteurs.

Box 2: Role and tasks of facilitators

The **facilitator** will be responsible for the following roles/activities:

- Presenting the peer learning session and its main “rules”/instructions for an effective management of the learning session. Make sure that participants are clear about the end goals of the peer learning.
- Addressing and moderating the discussion, collecting individual contributions by participants using the following guiding questions (that can be adapted by the partners) as the main objective to improve participant's capacity building and as a useful means to fill in the Matrix (See Table 1.4):
 - What are the needs expressed by the learning region and the main elements (considering local barriers) that can be addressed through the transfer activity?
 - What can be taken from the experience of the good/best practice of the country of origin presented, considering the main existing barriers or other that the learning regions may encounter? (*Please take into consideration the barriers indicated in D.6.2 chapter 4 Transfer management plans by each learning region*).
 - Taking inspiration from the lesson learned from the good/best practice, which could be some possible overcoming solutions that could prove viable in terms of adaptability and transferability potential of the good/best practice in your territory? *Please be specific*.
 - With reference to each measure/element of the good/best practice, which could be the set of preliminary recommendations that the Transfer team can formulate? (*Please be aware that the preliminary recommendations form part of the capacity exercise that could be later used within Task 6.3 during transfer workshops per transfer case, using a “learning lab” methodology*).
- Contributing together with the rapporteur to write the final outcomes of the workshop and presenting them during the debriefing plenary session.



A Matrix chart was structured as an intuitive tool to steer discussion and to collect comparable outcomes from the different participants in order to guide the capacity building, the transfer workshop and specifically to direct the peer learning sessions. An editable template to be used by facilitators and rapporteurs was provided as shown in Table 1.3.

Table 3: Matrix chart to be used by facilitators and rapporteurs to steer the Peer learning session

LEARNING	REGION	(COUNTRY)			
LIST OF PARTICIPANTS (names and organization)					
NAME OF FACILITATOR (Organization):					
NAME OF RAPPOREURS : (Organizations)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit (Please refer to Table 1.2. of Annex 1 of Deliverable 6.2 Draft Index)	Potential barriers identified by learning regions in relation to each element/measure (Please refer to Deliverable 6.1 Chapter 4)	Possible overcoming solutions as the result of the lesson learned from the training activity	RACCOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1.)			
		a2.)			
		a3.)			
	b) legal forms	b1)			
	c) business models	c1)			
	d) cooperation models and financial participation possibilities for local authorities in RECs.	d1)			
	Additional elements outside those indicated in the GA	o1)			

As such, the **matrix chart** was conceived as a general “compass tool” to be further adapted according to additional requests or questions that would emerge before and during the presentation sessions of the good/best practice.

Each learning region was advised to fill in the matrix with the relevant information during the peer learning session on the spot, as this tool served ultimately to constitute a synthesis of i) the core activities done and ii) the objectives achieved within Deliverable 6.2.

Prior to the dates of the training workshops, each transfer team was also advised to discuss with the hosting project partner topics relating logistics and content specific issues, or, to clarify in advance any relevant aspect of the transfer visit, including the role of Facilitators and Rapporteurs.

Additional practical information

Additional guidance was also provided concerning:

- final compositions and roles of the transfer teams;
- agendas;
- instructions on the flexible arrangements among transfer visits and transfer workshops, especially the peer learning sessions that could be used by organizers when planning the events;
- quick instructions concerning logistics and privacy issues.

Transfer teams

Effective transfer teams are key to successful transfer visits. Building a well-matched team is about involving the right people with the right skill and ensuring good communication as well as mutual understanding. To do so, it is important to bring together people who have similar roles in the local administration. At the same time a wide variety of experience and background must be ensured. Diversity brings greater creativity within the team helping to get the model region work evaluated from different perspectives finding also, most effective elements for their adaptation in learning regions.

The main participants in the transfer visits and training modules are the transfer teams selected by the partners of the consortium in collaboration with the national desks. As preliminarily indicated in Table 1.2. Deliverable 6.1, the transfer teams counted on a total number of 8-10 members from the consortium members, the stakeholders/market actors in the learning region and mentoring experts from the Consortium and their country of origin. As this constituted a general indication, the guidelines asked Tasks 6.2 consortium partners to finalise the composition of the transfer teams with names and roles of participants in advance to the implementation of all transfer visits scheduled in June 2022.

During the preparation phase (M20-21) of Task 6.2., the transfer teams were left to decide whether to open the dedicated capacity building and training workshops also to local experts of the good/best practice and representatives of the local authorities, that otherwise would only and in case be present during the plenary sessions and during the visits to the RECs.

Agenda setting/templates

According to the Guidance, the agenda for the transfer activities had to be organized following three modular steps:

- **a first step dedicated to the introduction and presentation of the good/best practice (plenary session);**
- **a second step (transfer visit) and;**
- **a third step (training module).**

Although the three steps were mandatory, project partners could however decide to combine them in the agenda in a flexible way, e.g., using a different temporal sequence.

In general terms, these activities could take the length of one full day or one and a half day arrangements. This latter arrangement could be adapted starting with half day as Day 1 of the meeting and a full one day as Day 2, according to the specific needs of participants. The training workshops could ideally be organized into the three modular steps as described above and following two different templates A, B of the provided agendas (see ANNEX 2 of this report.)

In the case of one full day arrangement (**template A**), the agenda would open with the morning session dedicated to the necessary welcome and technical communications on the good/best practice in preparation to the visit that would follow and close the morning works. The afternoon would be fully dedicated to the peer-assisted workshop.

In the case of the one and a half day arrangement (**template B**), the agenda would follow the same format of template A for Day 1 in this way allocating more time for the transfer visits. Day 2 (half a day) would be then fully dedicated to the peer-assisted workshop.

Alternative options to the **template B** could also be developed as follows:

(template B - option 1) in the case the agenda starts with half a day (Day 1) and follows with one full day (Day 2), the event could start in the early afternoon (e.g. 2 PM) with the introduction and presentation of the good/best practice, followed by training modules activities (peer learning workshop). Day 2 would be then fully dedicated to the transfer visit/s;

(template B - option 2) - in the case the agenda maintains one full day (Day 1) followed by half a day (Day 2), the event could start in the early morning (e.g. 9.00 AM) with the introduction and presentation of the good/best practice, followed by the training module on Day 1, and moving the visit to Day 2.

Template B - Option 1 was particularly suited in case of visits to a large and extended good/best practice, or to separate and/or distant good/best practices, as the time dedicated to the visits of different/large sites would take longer than that scheduled for a small single site. In all cases, the hosted and hosting project partners would have to ensure the necessary transfer time and possibly the longer distance to reach the sites.

Overall, given that ultimately the information provided remained indicative, partners could however adapt the programmes and the provided templates to their specific needs.

Logistics and privacy issues

The guidelines recommended that the hosting PP in cooperation with local representatives/experts of the good/practice, to ensure the following logistics indicated as mandatory, advisable, or optional.

- (MANDATORY) Register participants.
- (MANDATORY) Prepare the attendance list containing a privacy consent module to be handed over to participants, the latter enabling to get in advance the consent to publish photos or other privacy sensitive material.
- (OPTIONAL) Provide registered participants with a workshop folder including documents related to the day work. Folders should have to include the following:
 - Agenda of the day/days.
 - Short presentation of the project (leaflet).
 - Short description of the good practice to be transferred.
 - Blank sheets for notes and pens.
- (OPTIONAL) Provide a welcome coffee: if possible, the space should have to be located outside the Plenary Session room. In case of a one-day agenda, a running coffee service could be foreseen.
- Provide a Plenary and Workshop Session Room that could be adapted for both the plenary and the workshop session.
- (ADVISABLE) Provide chairs that could be easily arranged in rows facing the presentation side, during the plenary sessions or could be moved to form a circle during the peer learning workshop arrangement.
- (MANDATORY) Provide the following Equipment: PC, video projector, screen, or possibility of a wall to project on, internet connection, a microphone, and an audio amplification.

- (OPTIONAL) Additional equipment to be specifically used during the peer learning workshops: a flipchart and markers, blank sheets for notes and pens for the participants.

Overall, it was advised that the hosting PP would assess in advance with the hosted PP all practical aspects and details to ensure transport of participants to and from the good/best practice site, from the main venue where the conference meeting and the workshops would be held.

4 Transfer Workshop Reports

The reporting activity take into consideration the activities carried out by facilitators and rapporteurs during transfer visits/workshops and the input from experts and Transfer Team, focusing particularly on following issues:

- Analysis of the available resources: what can be taken from the experience of the good/best practice country of origin presented?
- Identification of the main aims and objectives to meet the needs of the recipients and / or defined by the working group (learning region and the country of origin of the good/best practice).
- Assessment of the adaptability according to criteria set by the participants and based on the established objectives (learning regions and the country of origin of the good/best practice).
- Evaluation of the peer criteria of the interventions and of the transferability potential (learning regions and the country of origin of the good/best practice).

Table 4: Transfer Workshop Report main issues

1	• Analysis of the available resources
2	• Identification of the main aims and objectives
3	• Assessment of the adaptability according to criteria set
4	• Evaluation of the peer criteria of the interventions and of the transferability

4.1 Germany

For this transfer activity, the learning region is the Free State of Thuringia (DE) and the good practices are from the mentoring regions of North Brabant and Gelderland (NL) (Table 5). Figure 5 illustrates the maps with the geographical location of all three regions.

The Free State (Freistaat) of **Thuringia** with its capital Erfurt is one of the 16 federal states in Germany.

It is situated in the centre of Germany and therefore landlocked and bordering with five other federal states. Thuringia has 2,133,378 (2020) inhabitants and covers an area of 16,202 square kilometres with a population density of 132 inhabitants per square kilometre. Large parts of Thuringia are characterised by the Thuringian Basin, which is flat, fertile and surrounded by smaller mountains. The Thuringian Forest (Thüringer Wald) is located in the South, the largest mountain range in the state that merges into the Thüringer Schiefergebirge, another mountain range in the east. The Harz Mountains in the North are reaching to the neighbouring states of Saxony-Anhalt and Lower Saxony. The major rivers are the Saale, Werra, Unstrut and Ilm.

Noord-Brabant is a province in the south of the Netherlands counting around 2.5 million inhabitants. The capital of the province is the city 's-Hertogenbosch. The province has a variety of economic activities ranging from high-tech industry, to manufacturing industry and to intensive agricultural industry. The total number of municipalities is 62, of which 5 are bigger cities which play a centre role in their surrounding sub regions. The city of Eindhoven (with 234.000 inhabitants) is the city with the largest population. The city of Altena is the city with the largest surface area of about 200 km². In and nearby the cities the roads are congested, but there are still larger parts of the province that are less densely populated. **Gelderland** is located at the centre-east of the country. It is the largest province by land area, and second by total area and borders with Noord Brabant. The capital is Arnhem.

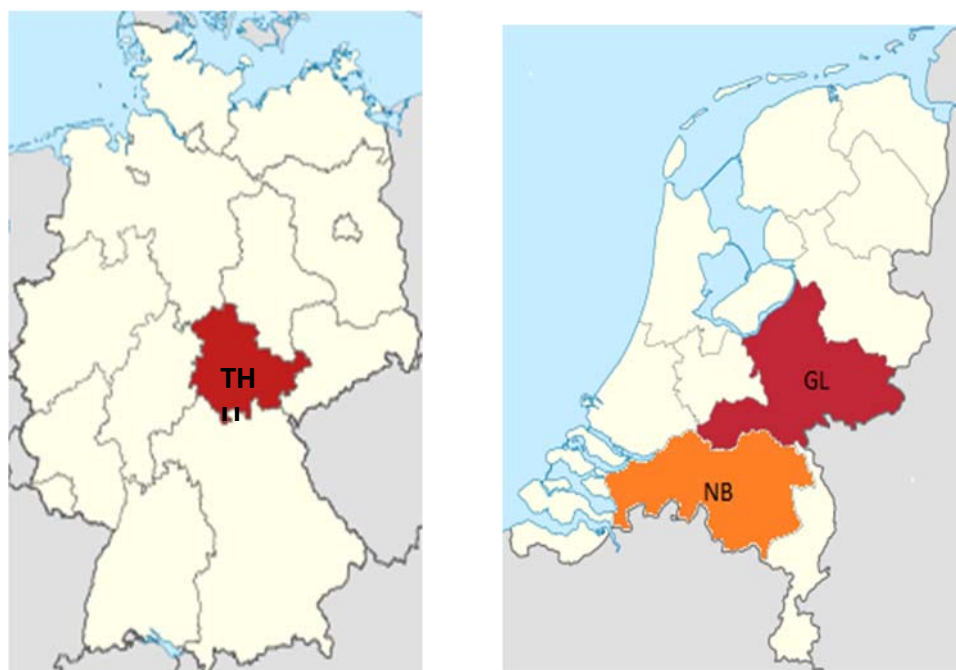


Figure 5: Maps of the learning (left) and mentoring regions (right)

Table 5: Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Germany
Learning Region	Thuringia
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	The Netherlands
Mentoring Regions	North Brabant, Gelderland

4.1.1 Good/best practice transfer measures selected

The representatives of the German learning region expressed interest to review and visit three good practices from The Netherlands and subsequently decide which practice would suit best to the learning region and be adapted.

Table 6: Description of the Dutch Best Practices selected by the learning region as the basis for capacity development and training workshops within Task 6.2

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Netherlands	Energy Gardens	Innovative concept to produce an additional socio-ecological value through an energy community project. Several renewable energy generation projects with multiple functionalities are implemented. Local citizens and stakeholders are directly involved from the start in the project's design, its exploitation and its maintenance. Presently four energy garden concepts are being implemented.	The 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. Local citizens and stakeholders are directly involved from the start in the project's design to take into account local characteristics (landscape, cultural-historical values) and to implement and maintain the projects, which are co-owned by the local communities. These pilots show that high social acceptance can be generated. The best practice possesses model character especially concerning the provision of social, biodiversity and community benefits as

			<p>well as concerning participation procedures.</p> <p>A large portion of its elements can be transferred with minor adjustments to other contexts, including Thuringia. Especially the procedural elements and participation methods, e.g., mapping out values are highly transferrable.</p>
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Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Netherlands	Citizen Wind Farm de Spinder	<p>This is one of the good practice cases analysed in COME RES. The citizen wind farm de Spinder was founded in 2015 and commissioned in 2020. Spinderwind BV is a partnership between the Brabant Energy Fund and 11 local energy cooperatives.</p> <p>The energy cooperatives are spread over 10 municipalities in the 'Hart van Brabant' region. A total of 619 households have invested. Activities comprise electricity production and sales on the wholesale market (electricity production in 2020: 24345 MWh). Spinderwind BV is also a licensed energy supplier, so the members of the energy cooperatives can also purchase their electricity directly from Spinderwind. Each holder of a 'Spinderdeel' of 250 EUR receives a maximum annual dividend of 18.50 EUR. Surplus profits go to the cooperatives and are used to finance other local energy projects.</p>	<p>Low community acceptance of wind energy projects is a key barrier in Thuringia. Many wind farms are planned by professional and often external investors. Community wind farms organized and (co-)owned by local cooperatives could be a way to overcome this barrier and enhance acceptance.</p> <p>The participatory process (both in procedural and financial terms) can be regarded as to have a model character for Thuringia. The Thuringian Label for Fair Wind Energy helps to ensure that similar participatory practices are implemented in Thuringia.</p> <p>The provision of risk capital via the Brabant Energy Fund can also be regarded as an element with model character for Thuringia.</p> <p>The Dutch national (non-binding) political target of 50% co-ownership of onshore renewable energy plants by the local community is a further element which has high model character for Thuringia.</p>

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Netherlands	Community Virtual Power Plant Loenen	<p>A community-based Virtual Power Plant (cVPP) facilitates local community energy initiatives to aggregate distributed generation and flexibility through an Energy Management System (EMS) platform. This optimizes energy flows in and out of the community based on different steering variables (e.g., community autonomy, GHG emissions, individual or community energy costs) and parameters (e.g., dynamic electricity tariffs, energy flows and weather conditions), helping to solve the grid constraints. The cVPP enables energy communities to manage energy demand and supply within their community, and to trade energy and flexibility on energy markets, which helps the overall integration of intermittent renewable energy generation in the Netherlands energy system.</p>	<p>A virtual power plant combines a diversified set of assets, such as generation units (PV, wind turbines), controllable assets (heat pumps, PV-invertors, dishwasher) and storage units, and ICT that enable energy management of all these assets. A community VPP is the bottom-up result of a community initiative, not promoted by a DSO or energy company. The activities of the Energy Management System in Loenen include:</p> <ul style="list-style-type: none"> • Maximizing self-consumption of local sustainable energy production. • Relieving the electricity grid (for potential compensation). • Making use of variable energy tariffs (based on EPEX prices). • Potential future application: Providing flexibility services for grid operators. <p>The transferability of this best practice to Thuringia meets several restrictions, being the lack of digitalisation (e.g., smart metering) one of the most relevant.</p>

Table 7: Details on the Good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

ENERGY GARDENS	Partner Country:	The Netherlands
	Learning Region:	Thuringia
	Responsible Partner(s):	FUB and TU/e
	Good/best practice transfer measures:	<p>The Energy Gardens support the national policy goal of reaching 50% local ownership of land-based renewable energy projects. In the Netherlands, there is a specific operational subsidy for REC, called the 'Cooperative Energy Generation' (SCE) subsidy. It is paid out in Euro per kWh produced. Each year a basic amount is set for each type of installation. The basic amount is the amount per kWh produced which is necessary to make the installation profitable. The basic amount for the year in which a cooperative applies for the subsidy is valid for the entire subsidy period of 15 years. Thus, there is long-term certainty about the return on investment. This scheme is, however, not transferrable to Thuringia.</p> <p>No specific elements were found relevant for Thuringia.</p> <p>An initial project subsidy was secured through lottery means. These funds are used to pay for: process support (participative co-design of the energy gardens); part of additional instruments (educational packages, additional plants, picnic areas); dissemination activities (networking, communication, training, sharing).</p> <p>Gardens with solar parks require investment by project developer(s). They do not pursue the highest financial gain possible. If the municipality leads the initiative (land ownership) then other functions can be added (municipalities can borrow at very low interest rates). Local energy cooperatives are satisfied with a lower financial return (they commonly offer a 4% return to people who sign up).</p> <p>The Energy Garden in itself adds value to the community, since it is open to the public, offers recreational and educational activities, is a place where to recreate and is embedded well ecologically and in the landscape. By involving volunteer groups in management and maintenance, the Energy Garden is co-owned by the community. Involving local nature and environmental associations for maintenance and monitoring of biodiversity, the community keeps ownership over nature and landscape.</p>
	a) Governance Structures	
	b) Legal Forms	
	c) Business Models	
	d) Cooperation Models and Financial Participation	

Partner country	Learning regions	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
The Netherlands	Thuringia	FUB/Tu/e	Energy gardens	<p><u>Referring to a):</u> The Energy Gardens support the national policy goal of reaching 50% local ownership of land-based renewable energy projects. In the Netherlands, there is a specific operational subsidy for RECs, called the 'Cooperative Energy Generation' (SCE) subsidy, which is based on the kWh produced (€/kWh). A unitary value is set for each type of installation, on a yearly basis. The unitary value is estimated as the price per kWh produced which is necessary to make the installation profitable. The amount established in the year in which the cooperative applies for the subsidy is valid for the entire subsidy period of 15 years. Thus, there is long-term certainty about the return on investment.</p> <p>Thus, there is long-term certainty about the return on investment. This scheme is, however, not directly transferrable to Thuringia. In Germany, the main support scheme for electricity from RES is based on competitive bidding and auctions. So far, energy community projects of a certain size had also to participate in the auctions if they wanted to receive a long-term oriented market premium.</p> <p>The auction related risks pose a great challenge to energy community projects. However, the Federal government recently decided to exempt wind and solar energy projects developed by citizen energy companies from the auctions which means that from 2023 investment security for community energy projects in these fields can be expected to increase.</p>

				<p><u>Referring to b)</u>: No specific elements were found relevant for Thuringia.</p> <p><u>Referring to c)</u>: An initial project subsidy was secured through lottery means. These funds are used to pay for: process support (participative co-design of the energy gardens); part of additional equipment (educational packages, additional plants, picnic areas); dissemination activities (networking, communication, training, sharing).</p> <p><u>Referring to d)</u> Gardens with solar parks require investment by project developer(s). They do not pursue the highest financial gain possible. If the municipality leads the initiative (land ownership) then other functions can be added (municipalities can borrow at very low interest rates). Local energy cooperatives are satisfied with a lower financial return (they commonly offer a 4% return to people who sign up).</p> <p>The Energy Garden in itself adds value to the community, since it is open to the public, offers recreational and educational activities, is a place where to recreate and is embedded well ecologically and in the landscape. By involving volunteer groups in management and maintenance, the Energy Garden is co-owned by the community. Involving local nature and environmental associations for maintenance and monitoring of biodiversity, the community keeps ownership over nature and landscape.</p>
Netherlands	Thuringia	FUB, TU/e	Citizen wind farm de Spinder	<p><u>Referring to a)</u>: An important financing instrument for the wind farm is the Sustainable Energy Production Incentive Scheme (SDE+), which is implemented by the Ministry of Economic Affairs. Under this scheme, the wind farm operators</p>

				<p>receive an annual market premium for 15 years, which compensates for the difference between production costs and the price of "grey electricity".</p> <p>In Germany, governmental support for RES based electricity is mainly shaped at the federal (national) level being beyond the direct influence of local/regional actors. Market premiums for wind energy plants are usually determined through competitive bidding and auctioning procedures, a system which exposes community energy initiatives to considerable market risks (see above). However, the Federal government recently decided to exempt wind and solar energy projects developed by citizen energy companies from the auctions which means that from 2023 investment security for community energy projects in these fields can be expected to increase.</p> <p>The participatory processes (both in procedural and financial terms) are among those elements which offer a relatively high transfer potential and have therefore been selected as key measures to be addressed in the transfer workshop.</p> <p><u>Referring to b):</u> No specific elements were found relevant for Thuringia.</p> <p><u>Referring to c):</u> Business models in similar constellations are possible and implemented in Germany and Thuringia (e.g., cooperation/joint enterprises comprising multi-utility companies (Stadtwerke) and energy cooperatives or cooperation/joint enterprises of professional project developers and energy cooperatives). No specific elements were found relevant for Thuringia.</p> <p><u>Referring to d)</u> The cooperation model is very context dependent. Germany does not have any</p>
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				comparable regional funds. But similar constellations are implemented (see above).
Netherlands	Thuringia	FUB, TU/e	Community virtual power plant Loenen	<p><u>Referring to a):</u> In the Netherlands, energy communities can apply for temporary exemptions from the electricity law to enable experimentation with innovative solutions (“regulatory sandbox”). Although, the initiative in Loenen did not apply for those exemptions, this generally provides a very useful tool. To implement such a project in Germany, similar regulatory sandboxes and living labs are in principle available. The regulatory framework for collective renewable energy consumption, peer to peer trade and energy sharing is generally more advanced in the Netherlands than in Germany.</p> <p><u>Referring to b):</u> No specific elements were found relevant for Thuringia.</p> <p><u>Referring to c):</u> The project in Loenen is a pilot project supported by European funds and does not present a real business case yet. There are similar pilot initiatives in Germany (e.g., Schöna). However, digitalisation and smart meter rollout are less advanced in Germany. This provides a severe barrier aggravating the implementation of such projects in Germany.</p> <p><u>Referring to d):</u> DSOs seem to be more open for a collaboration with community energy initiatives than in Germany. The severe grid congestions in the mentoring region may explain this difference.</p>
<p>Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i>; b) <i>legal forms</i>; c) <i>Business models</i>; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i>.</p>				

Table 8: Overview of socio-economic benefits of the Dutch best/good practice

Energy community	Participation/ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
Energy Gardens	✓	✓			✓	✓	✓
Citizen wind farm “de Spinder”	✓		✓		✓		✓
Community Virtual Power Plant/Energy Cooperation Loenen	✓	✓	✓	✓	✓		

4.1.2 Transfer Team participants in the activities

Several key stakeholders from Thuringia have been recruited for the Transfer Team including experts from the Thuringian Energy and GreenTech Agency with its wind energy and solar energy service centres, members of the Thuringian citizen/community energy association (BürgerEnergie Thüringen e.V.) and one Member of the Thuringian Parliament. Furthermore, a board member of the German Alliance for Citizen Energy (Bündnis Bürgerenergie e.V.) has joined the transfer team.

The project partners represented in the Transfer Team include the project coordinator Freie Universität Berlin, ICLEI and the law company BBH. This means that the Transfer Team represents a balanced mix of different technical and social disciplines including engineering, economics, political and administration science as well as law.

Table 9: Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region	Mentoring experts from consortium and country of origin
Thuringia	1. Energy Gardens 2. Citizen Wind Farm de Spinder	FUB	Representatives of the Thuringian Energy and GreenTech Agency, Wind Energy Service Centre and Solar Energy Service Centre (Members of the core group of the German	a) COME RES Partners from TU/e b) Representative of the non-profit NGO NMF, initiator of the Energy Gardens Gelderland, Nando Habraken

	3. Community Virtual Power Plant Loenen	ICLEI	Country Desk, key cooperation partner, promoter of community energy in Thuringia) Ramona Roth, Marcel Weiland, Thomas Platzek and Frank Schindler	c) Managing director of the cooperative Spinderwind, Jan-Willem Revet ; d) PR officer of the company, Wim Tobé e) Managing Director and initiator of the community virtual power plant Loenen , Andre Zeijseink
			Representatives of BürgerEnergie Thüringen e.V. (Members of the core group of the German Country Desk, key cooperation partner, Chairman of the Regional Community Energy Association in Thuringia) Prof. Reinhard Guthke, Marcel Schwalbach	
			Member of Parliament in Thuringia , European Committee of the Regions, Member of the German Country Desk. Markus Gleichmann	
			Board Member of the Alliance of Citizens' Energy (Bündnis Bürgerenergie, BBEn), Member of the core group of the German Country Desk. Malte Zieher	

4.1.3 Agenda

COME RES Transfer visit and training Energy Gardens / Spinderwind / cVPP Loenen 29-30 June 2022

Day 1: Plenary session and training

(Location: TU/e, 5612 AZ Eindhoven, Meeting room Zwarte Doos 1.04)

TIME	PROGRAMME
9.30 – 9.40	<i>Registration & welcome with coffee & tea</i>
9.40 – 9.55	All you need to know about the transfer visit <i>Erik Laes (TU/e)</i> Introduction of participants
9:55 -10:00	Overview of the COME RES Project <i>Maria Rosaria Di Nucci (Freie Universität Berlin)</i>
10.00 – 10.40	Introduction to Energy Gardens <i>Nando Habraken (Natuur en Milieu Gelderland, Energie en Circulaire Economie)</i>
10.40 – 11.00	Q&A <i>Moderator: Erik Laes (TU/e)</i>
11.00 – 13.00	Workshop: what did we learn? What is transferrable and how? <i>Introduction: Marcel Weiland (Thuringian Energy and GreenTech Agency ThEGA, Service Centre for Solar Energy)</i> <i>Facilitator: Maria Rosaria Di Nucci (FUB)</i> <i>Rapporteurs: Erik Laes & Rien De Bont (TU/e)</i>
13.00 – 14.30	<i>Lunch – provided by TU/e</i>
14.30 – 15.10	Introduction to Community Wind Farm Spinderwind <i>Jan-Willem Revet (Spinderwind)</i>
15.10 – 15.30	Q&A <i>Moderator: Erik Laes (TU/e)</i>
15.30 – 17.30	Workshop: what did we learn? What is transferrable and how? <i>Introduction: Reinhard Guthke/Marcel Schwalbach (Association for Citizen Energy Thuringia/Bürgerenergie Thüringen e.V.)/ Thomas Platzek (Thuringian Energy and GreenTech Agency ThEGA, Service Centre for Wind Energy)</i> <i>Facilitator: Michael Krug (FUB)</i> <i>Rapporteurs: Erik Laes & Rien De Bont (TU/e)</i>
17.30 – 17.45	Closure day 1 <i>Lessons from a political perspective: Markus Gleichmann, Member of Parliament of Thuringia, European Committee of Regions</i>
19.30	<i>Dinner – offered by TU/e at restaurant Kazerne</i>

Day 2: Transfer visit to cVPP Loenen (Meeting place: Hoofdweg 73, 7371AE Loenen)

TIME	PROGRAMME
8.30	<i>Pick up at Inntel hotel Eindhoven for transfer to Loenen (2 h drive)</i>
10.30 – 11.10	Welcome + introduction to cVPP Loenen <i>Andre Zeijseink</i>
11.10 – 11.30	Q&A <i>Moderator: Erik Laes (TU/e)</i>
11.30 – 12.30	Guided tour cVPP Loenen
12.30 - 13.30	<i>Lunch – provided by cVPP Loenen</i>
13.30 – 14.30	Workshop: what did we learn? What is transferrable and how? <i>Introduction: Malte Zieher (Alliance of Citizen Energy/Bündnis Bürgerenergie)</i> <i>Facilitator: Arthur Hinsch (ICLEI)</i> <i>Rapporteurs: Erik Laes & Rien De Bont (TU/e)</i>
14.30 – 14.45	<i>Lessons from a political perspective: Markus Gleichmann, Member of Parliament of Thuringia, European Committee of Regions</i> Conclusions – Next steps <i>Maria Rosaria Di Nucci, Michael Krug (FUB)</i>
<i>Transfer to Arnhem train station</i>	

4.1.4 Training visit

Representatives from the German learning region considered all three good and best practices from the Netherlands included in the COME RES good practice portfolio highly interesting and relevant for a transfer to Thuringia and decided to learn on the spot more about the initiation and implementation of all three of these projects.



Figure 6: Teams from the learning and mentoring region meeting at the TU/e in Eindhoven

Energy Gardens

Energy gardens pilots are being developed in various regions in the Netherlands.

Nando Habraken from Natuur en Milieu Gelderland, process supervisor for the transformation of the former waste disposal site in the Energy Garden De Langenberg, participated in the training session as a mentor and answered all questions.

Their geographical location is indicated in the figure below.

Pilots

First Energy Gardens in the Netherlands

- ◆ Mastwijk, Utrecht
- ◆ Wijhe, Overijssel
- ◆ Assen, Drenthe
- ◆ Zelhem, Gelderland
- ◆ Partnerproject Griendtsveen, Limburg



Figure 7: Map with the geographic localization of the best/good practice visited (Energy Gardens)

Source: Presentation of Nando Habraken

The Energy Gardens differ from each other with respect to surface area, solar field and power but also the percentage dedicated to societal functions. These characteristics are depicted in the table below.

Table 10: Characteristics of the four Energy Gardens currently under development

Source: Energietuinen. Presentation of Nando Habraken

	Surface Area	Solarfields	% Societal Functions	Power	# Households
Mastwijk, Utrecht	20 ha.	12 ha.	40%	10,9 MW	3.000
Assen-Zuid, Drenthe	53 ha.	23 ha.	56%	21,3 MW	6.000
Wijhe, Overijssel	25 ha.	8 ha.	68%	7,8 MW	1.900
Zelhem, Gelderland	+/- 20 ha.	Max 1,5 ha.	92,5%		

Energy garden De Langenberg

Gelderland is the homeland province of the Energy Garden best practice analysed in the site visit. It is the fourth province after Drenthe, Overijssel and Utrecht where the Energy Gardens concept of the Nature and Environment Federations is going to be realised.

Plans for the new Energy Garden De Langenberg have been developed near Zelhem in the municipality

Bronckhorst. The location is a former landfill used in the 1960s. The place is nowadays a popular spot for walkers and donkeys from the donkey stable. The municipality of Bronckhorst had already plans to install in De Langenberg a solar park. The design and construction of the energy garden is taking place in cooperation with the surrounding area and the local energy cooperative.



Figure 8: Map with the geographic localisation of the Energy Garden De Langenberg

Source: <https://www.energietuinen.nl/energietuin/energietuin-de-langenberg/>

The project is being supervised by Natuur en Milieu Gelderland on behalf of the Nature and Environment Federations that is investigating the possibilities with the current users. The solar park De Kwekerij in Hengelo from the same municipality stood as a source of inspiration.

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. The local environment was actively involved in the design of the Energy Garden. The municipality organized a kick-off meeting on 6 December 2021. Neighbours and interested parties received information about the plans and had the opportunity to participate. The consortium includes a collaboration between energy cooperatives BioZon, Agem, ZAMC, de Ezelstal, Wildbeheereenheid Zelhem-Doetinchem and the municipality of Bronckhorst. ZAMC, the Ezelstal and Energiecoöperatie BioZon are already located on the site of the former landfill. The possibilities and opportunities have been explored together. These parties want to jointly design, develop, realise and manage the Energy Garden. Natuur en Milieu Gelderland was established in 1971.

This is an association with around one hundred affiliated local and regional nature and environmental organizations and over 500 private members. Important stakeholders are the province, other nature and environmental organizations, companies and involved citizens.

Participatory procedures

On 6 April 2022, a field visit and an initial sketching session marked the start of the design for the Energy Garden de Langenberg in Zelhem. The Energy Garden is going to be designed together with residents, companies and other parties. Local residents and other stakeholders addressed the issue of how existing values can be preserved and at the same time being enriched with new ones. In the participatory design, interests and ambitions are put on the map, without immediately making choices about the design itself. The aim of the initiators is a province with a varied landscape, rich biodiversity, space for nature and a clean environment for now and for the future. A province in which companies are front-runners, energy-neutral and circular, where citizens enjoy clean air and of which the inhabitants can be proud.

As a participatory method, mapping out values was used. It was mapped how residents, companies and other parties view the area and what values does it represent for them. Values are not only about nature and the landscape, but also about cultural history and the use of the area, for example for recreation, sports and leisure. The local residents aim to keep the area peaceful for nature and people and want the solar panels to be as invisible as possible towards the houses.

The landscape designer is going to start working in the near future to draw up a zoning plan. The zoning plan is a map showing the functions and activities, such as solar panels, nature development, water storage and recreational facilities. During the next session before the summer, this will be presented and participants can give their feedback.

Table 10: Fiche presenting the good/best practice part of the transfer activity

Energy Garden De Langenberg (Netherland, Gelderland, municipality of Bronckhorst)	
Location	Municipality of Bronckhorst
Owner	Collaboration between energy cooperative BioZon, Agem, ZAMC, de Ezelstal, Wildbeheereenheid Zelhem-Doetinchem and the municipality of Bronckhorst
Installation date	N/A still in the planning stage
Plant's power	Solarfields max. 1.5 ha
Plant annual production	N/A
CO2 saving	N/A
1. DESCRIPTION	Next to contributing to local energy and climate agendas, enhancing ecological value and biodiversity is one of the pillars of Energy Gardens. In the Energy Garden, specific ecological design sessions lead to special attention to local species, such as birds, reptiles, insects and flowers. Residents and local nature and environmental volunteers are consulted and involved in the design and practical maintenance and monitoring of biodiversity. Energy

	gardens are built on brownfields, as e.g. on unused industrial terrain, or in one case on a remediated landfill.
2. PLANT'S CHARACTERISTICS	The project is still in the development stage. The technical characteristics of this energy garden are based on a multifunctional site where the generation of sustainable energy goes hand in hand with nature and recreation. A Solar park is going to be installed in a former landfill used in the 1960s and renatured as a recreational park. The location will stretch over an area of 15 hectares, but most of that area will not be specifically used for solar energy, which will cover only max. 1.5 hectares. The number of solar panels is still being determined in consultation with residents and other stakeholders.
3. RESULTS OBTAINED	The project is still in the initial implementation stage. The Energy Garden adds value to the community, since it is open to the public, offers recreational and educational activities, is a nice place to recreate, optimally ecological and embedded in the landscape. By involving volunteer groups in management and maintenance, the Energy Garden is co-owned by the community. Involving local inhabitants and environmental associations for maintenance and monitoring of biodiversity, the community keeps ownership over nature and landscape. Several economic benefits relate to energy production and distribution, such as financial participation with shares or certificates in the project by citizens and local companies, employment for local companies, and a local fund ('omgevingsfonds') for the local community. Compared to commercial projects, economic benefits are more limited since additional costs for the development of the ecological functions of the energy gardens has to be taken into account. Typically, an energy cooperative offers about 4% profit to its members.
4. OTHER OBTAINED CHARACTERISTICS	Innovative public participation procedures based also on mapping out values.

Citizens' Wind Farm De Spinder

The wind farm is located in the city outskirts near the De Spinder landfill in the north of Tilburg (Noord-Brabant).



Figure 9: Citizen Wind farm de Spinder

Author: Dion de Bakker, Copyright: www.diondebakker.nl

Table 11: Fiche presenting the good/best practice part of the transfer activity

Citizen wind farm de Spinder (Netherlands, Noord-Brabant, City of Tilburg)	
Location	The wind farm is located on the city outskirts near the De Spinder landfill in the north of Tilburg, west of the N261 to Waalwijk. The four turbines are located on the grounds of the waste processor Attero, the water purification plant of Waterschap de Dommel and the municipality of Tilburg.
Owner	Spinderwind BV owns and manages the wind farm. Burgerwindpark de Spinder owns 50% of the company Spinderwind BV. The other 50% is owned by the EnergieFonds Brabant (public investment company). Burgerwindpark de Spinder is an alliance of 11 local energy cooperatives (LECs). Each member of the 11 LECs was offered the opportunity to buy one or more shares (so-called Spinderdelen) in the wind farm, up to a maximum of 80 shares. Profit is split equally between EnergieFonds Brabant and Burgerwindpark de Spinder.

Installation date	In 2015, the company Spinderwind BV was set up, a partnership between the Energiefonds Brabant and the 11 local energy cooperatives united in Burgerwindpark de Spinder. The wind farm started operation in April 2020.
Plant's installed capacity	The wind farm consists of 4 wind turbines with a combined electric capacity of 14.4 MW.
Plant annual production	In 2020, 24,345 MWh of electricity were produced.
CO2 saving	No information about GHG savings available.
1. DESCRIPTION	The citizen wind farm de Spinder was founded in 2015 and commissioned in 2020. Spinderwind BV is a partnership between the Brabant Energy Fund and 11 local energy cooperatives. The energy cooperatives are spread over 10 municipalities in the 'Hart van Brabant' region. A total of 619 households have invested. Activities comprise electricity production and sales on the wholesale market (electricity production in 2020: 24,345 MWh). Spinderwind BV is also a licensed energy supplier, so the members of the energy cooperatives can also purchase their electricity directly from Spinderwind. Each holder of a 'Spinderdeel' of 250 EUR receives a maximum annual dividend of 18.50 EUR. Surplus profits go to the cooperatives and are used to finance other local energy projects. Local residents were mobilized through an intensive recruitment campaign. That makes it a good example of citizen participation.
2. PLANT'S CHARACTERISTICS	Four Nordex mills, type N117, with a total installed capacity of 14.4 MW.
3. RESULTS OBTAINED	We lack information about revenues and profits of the company. Excess profits (beyond the profit attributed to the owners of the 'Spinderdelen') go to the 11 LECs, who can use this money to realize local projects with additional societal benefits (e.g., organization of local energy bureaus to give advice to citizens on energy use). In addition, the implementation of Spinderwind led to the signing of a cooperation agreement between the municipalities of the Hart van Brabant region and the local energy cooperatives for realizing the goals as set down in the regional sustainable energy strategy.
4. OTHER OBTAINED CHARACTERISTICS	Spinderwind BV gives all residents from seven municipalities in the Tilburg area the opportunity to participate financially in the project through the acquisition of so-called 'Spinderdelen' (i.e., shares of 250 Euro). They raised a total of €1.5 million from private households (619 in total). These individuals are the

holders of Spinderdelen and, through their membership of one of the eleven affiliated energy cooperatives, they own part of the wind farm. They were approached through a large, local recruitment campaign. Thanks to the great interest, it was possible to raise sufficient equity capital. Banks provided additional loans needed to raise the necessary capital.

Community Virtual Power Plant in Loenen

The virtual community power plant is located in Loenen (Province of Gelderland), a village with 3,200 inhabitants (1,400 households) which lies in a rural, green and touristic area.



Figure 10: Transfer Team visiting the PV installation at Thomassen distribution centre in Loenen

Source: @Di Nucci FUB

Possible roles of cVPP in electricity market

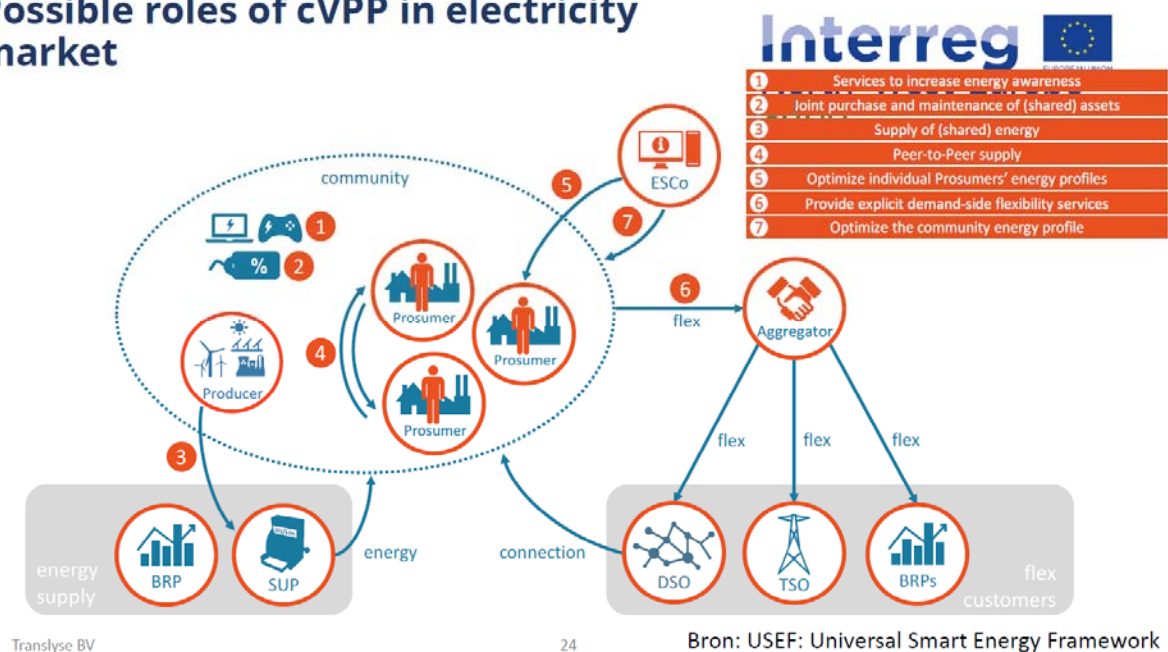


Figure 11: Possible roles of cVPP Loenen

Source: Presentation by Andre Zeijseink

Table 12: Fiche presenting the good/best practice part of the transfer activity

Community Virtual Power Plant Loenen (Netherlands, Gelderland, Municipality of Loenen)	
Location	Rural village of Loenen (Province of Gelderland). Loenen has 3,200 inhabitants (1,400 households) and lies in a rural, green and touristic area.
Owner	The cVPP combines private assets (PV installations, EV, EV charging stations, large scale and small-scale battery storages, heat pumps owned by private households and enterprises, collectively owned PV generation assets) and the Energy Management System (EMS) owned by the Energy Cooperative Loenen.
Installation date	The EMS was installed in 2020.
Plant's power	There are nearly 100 users, by end of 2022 likely 150
Plant annual production	Not applicable.
CO2 saving	
1. DESCRIPTION	The community energy initiative started in 2013 as 'Loenen Energy Neutral' when the municipality was awarded 200,000 EUR in a sustainability contest. The municipality established a revolving

	<p>fund and supported households to invest in solar panels, insulation, and heat pumps leading to 25% coverage of the village electricity demand in 2020. The number has increased to 50% in 2021. In 2018, the cVPP project started in the frame of the INTERREG NWE project cVPP. As part of the cVPP project, the Energy Cooperative Loenen (ECL) was founded in 2019 which explored the possibilities for local energy management and trading enabled by an Energy Management System to enable P2P trade, energy sharing and collective self-consumption of renewable energy, to achieve reductions of energy costs by shifting demand in response to dynamic energy prices, and to deal with imbalances as a result of the increase of RES in the village. The system is designed to offer services to the network company, such as balancing frequency or voltage control. These services can earn money for the community and/or create capacity. However, the number of participants is too small yet, so there is a need to add participants and flexible assets to achieve the necessary scale. There are plans to set up a cooperative aggregator to sell flexibility. The cVPP project has been funded by the EU (Interreg NWE) and by the province of Gelderland.</p>
2. PLANT'S CHARACTERISTICS	<p>Technically, the cVPP consists of close to 100 residential PV installations, a 0,9 MWp industrial PV installation, several controllable heat pumps and an EV-charging point, all connected through a tailor-made Energy Management System (EMS). During the up scaling phase of the project, more residential and industrial PV, storage facilities and flexible assets will be added.</p> <p>The Energy Management System includes smart meters, household dashboards and community dashboards and has the following functions:</p> <ul style="list-style-type: none"> • Aggregation of all data from smart meters, heat pumps, solar-PV (inverters), EV-charging points and storage systems. • Collecting dynamic energy tariffs (APX). • Presentation of all data at the individual dashboard level and community dashboard level. • User based algorithm selection for steering heat pumps.
3. RESULTS OBTAINED	<p>By 9 July 2022, the installed solar power (kWp) per inhabitant is 0.211 kWp. CO₂ emission savings amount to 2.564 tons per year. Joint energy bill savings in Loenen amount to 671.971 EUR.¹³</p>

¹³ <https://loenenenergie.nl/>

4. OTHER OBTAINED CHARACTERISTICS

The cVPP has been developed via a **bottom-up process**. It is based on an initiative promoted by and for the local inhabitants and not by an energy company or DSO. Individual wishes and opinions do count, end results are often based on compromises. Shared values and interests are leading.

4.1.5 Training Modules

The training modules took place in three separate sessions subsequently to the respective presentations of the good and best practices by the Dutch mentoring experts.

Due to the fact that the learning region Thuringia expressed interest for three practices, the training sessions could not be conducted as in depth as if there had been only one major case. Each training session thus chose to focus more on some specific aspects rather than others. During the training sections for all three good practices, the facilitators appointed for the respective good practices made use of guiding questions and addressed the following issues:

1. What are the **specific needs** in Thuringia in the field of citizens'/community energy? Please, take into account the following:
 - a. Governance structures including gaps in the 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
2. Which **elements** of the **Best Practice case** are particularly relevant for Thuringia taking into account its specific needs?
3. Which **elements** of the Best Practice case could be more easily transferred/accommodated? Which elements are more difficult to transfer/accommodate?
4. Where do you see the most **important barriers in Thuringia** for a successful transfer of the Best Practice case or elements of it? How could these barriers be overcome?
5. What **actions and/or legal, governance and policy changes** are required in Thuringia to successfully transfer/accommodate the Best Practice in order to achieve viable solutions after the lifetime of COME RES?

The case of the Energy Gardens

After the introduction and presentation of the **Energy Gardens** by the mentor Nando Habraken of Natuur en Milieu Gelderland (see annex, presentation slides), and a subsequent Q&A session, a dedicated training session followed. The training session was in line with the guiding questions developed by FUB before the workshop (see above) which were based on the guidelines prepared by the WP leader. The interactive discussion followed the guiding questions; the training session was facilitated by FUB and opened with an introductory statement by the Thuringian Association for Citizen Energy and the Thuringian Energy and GreenTech Agency. In the training session there has been an intense exchange

between the mentoring expert and the experts from the learning region Thuringia. The training focused mostly on major challenges and barriers for the implementation of such a project, the important environmental and social benefits that the project brings and finally the preliminary organizational structure and decision-making model.

There is no unique organizational structure and decision-making model for an Energy Garden project. Much depends on who is going to take up the role of the project developer. Nevertheless, a common element to all four energy garden projects is the involvement of a local initiative. Some Energy Gardens are entirely owned and developed by an energy cooperative, some are owned and developed together with a commercial partner. Another possibility is that ownership will be opened up to citizens through crowdfunding. In any case, also a local fund will be set up from the profits of the Energy Garden project.

Nature protection aspects, e.g. the way energy can be embedded ecologically in the landscape as well as the possibility to link visits with educational activities were considered highly inspirational. But also the form of collaboration between energy cooperatives and the municipality who jointly designed, develop, realize and manage the Energy Garden is a transferable model. Moreover, the experts identified also certain elements in the participatory design that are partly transferable. These are in particular the way neighbors and interested parties received information about the plans and the opportunity to participate and the procedure to map how residents, companies and other parties view the area and what values this represents for them values are not only about nature and the landscape, but also about cultural history and the use of the area.



Figure 12: Nando Habraken explains the major components of the Energy Gardens

Source: @Di Nucci FUB

The case of the citizen wind farm de Spinder

After the introduction and presentation of the **citizen wind farm de Spinder** by the mentor Jan-Willem Revet (see annex, presentation slides), and a subsequent Q&A session, a dedicated training session followed. The training session followed very much the guiding questions developed by FUB before the

workshop which were based on the guidelines prepared by the WP leader. Due to the small size of the transfer team, the group was not split into smaller groups and the interactive discussion followed the three guiding questions. The training session was facilitated by FUB and opened via introductory statements by the Thuringian Association for Citizen Energy and the Thuringian Energy and GreenTech Agency. This was followed by an intense interactive discussion engaging the two mentoring experts from the citizen wind farm de Spinder and the German members of the transfer team. The training session was concluded by a political statement from a member of the Thuringian Parliament. Despite different institutional, political and socio-economic conditions, the transfer team identified some elements that might be at least partially transferred and accommodated in Thuringia:

- The national non-binding target of 50% local co-ownership
- The strong participatory procedural design.



Figure 32: Jan-Willem Revet illustrates major steps in the negotiation for the project

Source: @Di Nucci FUB

The case of the community virtual power plant Loenen

After the introduction and presentation of the community virtual power plant (cVPP) by the mentor André Zeijseink (see annex, presentation slides), and a subsequent Q&A session, a dedicated training session followed. The training session followed very much the guiding questions developed by FUB before the workshop which were based on the guidelines prepared by the WP leader. Due to the small size of the transfer team, the group was not split into smaller groups and the interactive discussion followed the three guiding questions. The training session was facilitated by ICLEI and opened via an introductory statement by Alliance of Citizen Energy (Bündnis Bürgerenergie). This was followed by an intense interactive discussion engaging the mentoring experts from the cVPP Loenen and the Dutch project partners and the German members of the transfer team. The training session was concluded by a political statement from a member of the Thuringian Parliament.

Afterwards, the transfer team was visiting the solar plant installed at the Thomassen distribution centre in Loenen. The solar plant is operated by ECL Zon BV, an operating company of the Energy Cooperative Loenen that was set up in 2019 especially for the implementation of solar projects. The energy cooperative is full owner of ECL Zon BV. On the roof of the Thomassen distribution centre, 2,404 solar panels have been installed, generating approximately 800 MWh of sustainable electricity annually.

This can be used to supply more than 300 households. It is one of the largest solar roofs in the province of Gelderland. The solar roof involves an investment of 690,000 EUR, of which 80% is financed by Rabobank and 20% (138,000 EUR) via bonds by the members of ECL. They provide a loan (bond) for the duration of 15 years, whereby a part of the loan is repaid every year. The annual yield on the bonds is set at 4.0%.¹⁴ Although there are similar pilot projects under way in Germany (e.g., community virtual power plant developed by Elektrizitätswerke Schönau), the transfer team identified the slow digitalization and lack of smart meters as the most important barrier for transferring the case to Thuringia.



Figure 14: André Zeijseink explains how citizens in Loenen ceased being passive consumers

Source: @Di Nucci FUB

4.1.6 Transferability potential of the best practice concepts from the region of origin to the learning region

The case of the Energy Gardens

With an eye on the transferability to Thuringia, mentoring and learning region experts discussed major challenges and barriers. They identified the following issues:

- To convince (commercial) developers and policy makers to embark on an Energy Gardens project instead of traditional solar parks
- To accept lower financial return
- To create funding for the maintenance of societal functions in Energy Gardens
- To organize and support activities by volunteers and visitors in the Energy Gardens

¹⁴ <https://loenenenergie.nl/cooperatie/>

- Local ownership is not only an economic issue, it involves ‘engagement of the members of the renewable energy community’. This needs to be accommodated by the development process.

The identified lessons for further actions are:

- Importance to map (natural) values of the area together with the relevant stakeholders (who know the area).
- Municipality and developer must be flexible enough to accommodate changes in the design of the solar park as part of co-creation/co-design with citizens.
- Importance to continue to communicate with local environment, even when progress is slow.
- Material should be (visually) rough enough and stimulate to provide input.
- Clarify who makes decisions about what and what is already fixed.
- Involvement of (local) artists or creative.
- Recognition of the fact that roles change during the process.
- Citizen participation in the design, realisation and exploitation and in each energy garden project is a prerequisite for its success.

From the side of the Thuringian experts, it was discussed which organizations are most suitable to initiate the process and whether the models from the Netherlands are suitable for Thuringia. The four Energy Garden projects involved several key actors; but each project was organized in partnership with the NGO NMF, which is responsible for organization of local participation in the design and implementation of the energy garden. NMF also often functions as a local point of contact for citizens. Next to NMF, each project is mainly driven by project developers. These are different for each location: in **Mastwijk**, the project is realized on a renatured landfill site, and the waste company (Afvalzorg) is owner of the site, whilst a local energy cooperative has been created as a result of the participative process. In **Assen-Zuid**, the Municipality owns the project land, Engie acts as commercial project developer and there is a cooperative project developer, Bronnen van Ons. In **Wijhe**, the municipality owns the land, and the project development is led by the local foundation ‘De Noordmanshoek’.

Thuringian experts suggested that – as in the case of the Netherlands – environmental NGOs would represent a neutral and trustworthy instance for initiating such a project. Other experts were of the opinion that the initiator could be the municipality in which the potential garden is located or commercial actors (as in the case of the Energy Garden Mastwijk, as the land belongs to them) in a PPP model.

The case of the citizen wind farm de Spinder

Below are presented the key results of the peer learning activities. In the transfer session, the transfer team assessed the transferability potential of the citizen wind farm de Spinder as relatively limited. Currently, there are 35 energy cooperatives active in Thuringia (mostly in the field of PV). There are few citizen wind farms/turbines already in place and some wind farm projects are currently planned with the financial participation of local citizens and/or energy cooperatives. So, generally the model of citizen/community wind farms is known in Thuringia, but there are only few practical examples. Direct transferability of the Dutch case is limited due to different land ownership structures, different political

and institutional frameworks, socio-economic differences (e.g., levels of household income/savings and household propensity to invest in collective RES projects), the dominance of professional project developers in securing land for wind farms and the partly strong opposition against wind farm developments. However, the existing Label for Fair Wind Energy offers good opportunities to accommodate certain elements of the Dutch good practice case. Particularly, the **non-binding national political target of 50% co-ownership** in the Netherlands was considered as a useful orientation for Thuringia. A similar target threshold might be transferred resp. accommodated in the Thuringian context in the form of amendments to the Thuringian Label for Fair Wind Energy.

The **strong participatory procedural design** has been identified as another element that might be at least partially transferred to Thuringia. The training session revealed that municipalities in Thuringia should more actively inform local landowners and residents about the option to set up community wind/solar farms or wind/solar farms in local co-ownership. They should encourage landowners not to conclude too early pre-contracts with developers. Furthermore, the state government might consider introducing **certain requirements** for developers **to early inform municipalities** and **local residents** about their plans to set up wind or solar farms. The new Federal Onshore Wind Energy Act adopted by the Bundestag on 7 July 2022 envisages that the 16 federal states in Germany are required to designate more land for wind energy priority areas (on average from currently 0.8% to 2% of the total territory). Pursuant to this law, Thuringia has to increase the share of land designated for wind energy to 1.8% by 2026 and 2.2% by 2032. Hence, the need to develop more priority zones offers to a certain extent opportunities to improve procedural participation and encourage active procedural and financial engagement of municipalities and residents in the future.

Below we summarise some key recommendations. These have been commonly developed **during the training workshop** in Eindhoven and at a **follow up meeting** held after the transfer visit on 12.07.2022.

- Municipalities, landowners and residents should be pro-actively informed about the land areas to be designated in the future and the possibilities and benefits of developing wind farms in community (co-)ownership. The Thuringian Energy and GreenTech Agency (ThEGA) is already now quite active with the promotion of its voluntary Label for Fair Wind Energy and its manifold dialogue and communication activities. These activities should be intensified and further supported by the state government.
- Policy makers in Thuringia should consider introducing a **quantitative political target** for community energy (e.g., minimum share of local ownership, number of new energy communities to be established by 2030).
- Policy makers in Thuringia should consider introducing **regulatory policy measures** requiring a minimum share of local/community ownership following the Dutch example (see also the experience of the federal state of **Mecklenburg-West Pomerania** that introduced a similar instrument). Alternatively, the Thuringian Energy and GreenTech Agency (ThEGA) should check if the voluntary **Quality Label for Fair Wind Energy** might be extended to include a guideline requiring a minimum share of local co-ownership.
- Municipalities should inform local landowners and residents about the option to set up community wind/solar farms or wind/solar farms in local co-ownership. They should encourage landowners not to conclude too early pre-contracts with developers.

- The state government should consider introducing **more requirements** for developers **to early inform municipalities** and **local residents** about their plans to set up wind or solar farms.

The case of the community virtual power plant Loenen

Although the transfer team identified certain potential crystallization points for a cVPP in Thuringia (e.g., in Jena), there are important barriers which hamper a direct transfer. The most important impediment is the retarded rollout of smart meters in Germany. Germany is considerably lagging behind other European countries on this issue. Another important barrier is a generally low willingness of DSOs to cooperate with energy cooperatives. Furthermore, access to balancing markets is highly restricted. There is no legal framework yet for energy sharing and peer to peer electricity trade although this is expected to change in the future.

Energy Gardens

Table 13: Matrix chart used to steer the Peer learning activity

LEARNING REGION: (COUNTRY)					
LIST OF PARTICIPANTS (see List)					
NAME OF FACILITATOR (Organization): Maria Rosaria DI Nucci (FUB)					
NAME OF RAPPORTEURS: (Organization): Rien De Bont & Erik Laes (TU/e)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lesson learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1) Intensive participation (co-creation and co-design of energy garden concept) leads to high level of acceptance	Intensive participation comes at a price, not only in terms of money, but also in terms of time investment.	Public acceptance is also a problem in Thuringia, and public protest could also lead to project delays. The case could be made that an energy garden does not necessarily imply longer project development times.	
		a2) The participation process is initiated by a nature conservation association with support by the municipality	'Dark green' nature associations are opposed to the development of RE projects in nature areas.	Some NGOs in Thuringia could also be interested in being the driver behind an energy garden, e.g., BUND or nature associations that see the need for reconciling ecological value and climate protection goals, etc.	

		a3) The Netherlands has an official (non-binding) political goal of 50% participation by local actors in a local RE project	Germany does not have a similar target.		
					<p>ThEGA experts discussed which would be the right actors to 'push' such a project.</p> <p><u>Funding</u></p> <p>Recommendation: It is advisable to have two different kinds of funding, one for initiating the process, and planning and one for the project. Also, in Germany the Lotto-Stiftung could cover the costs for initiating the process. However, it is highly competitive to have access to such funds.</p> <p>Summary: not reached, still necessary to further discuss to what extent this case is transferrable and which forms of financing are available and most suitable.</p>

					Participants will start exploring possibilities on their return.
	b) legal forms	-			
	c) business models	<p>c1) Financial return is guaranteed for participants in the Energy Garden, but limited (e.g., to max 4%) and additional ecosystem elements need to be financed, too.</p> <p>c2) Start-up capital (to start and get the participative process running) is provided by the National Lottery or municipality.</p>	<p>In Thuringia, charity funds are only available for projects that have no commercial interest. This is a problem for citizen energy cooperatives, as they are in German law not classified as organizations with a purely social purpose ('gemeinnützig').</p> <p>The state government of Thuringia has established a new revolving fund supporting citizen energy projects in Thuringia providing start-up funding. If the project is approved, one needs to pay back the funding. This could be a problem for an energy garden development, because the development costs will be higher and all costs need to be repaid. So there will have to be additional funding for the</p>	<p>A possible solution could be to clearly split the 'social' (e.g., the participation process, renaturation) and the 'commercial' part (the renewable energy infrastructure) of the Energy Garden project, with separate funding.</p> <p>Sometimes, even commercial actors could be interested to invest in the 'social' part of the Energy Garden, as they might be interested e.g. in enhancing public acceptance.</p>	<p>Application to Lotto Stiftung could be a means to cover the social part of the project. It is suggested that environmental NGOs could act as the primary applicant.</p>

			participation part (split from the development of the solar park).		
	d) cooperation models and financial participation possibilities for local authorities in RECs.				
	Additional elements outside those indicated in the GA	e1) Initiators of the Energy Garden project are landowners (public or private) that are interested in reconciling renaturation with renewable energy development	Landowners in Thuringia are often not locally rooted and live outside the state. They are often only interested in financial gains. Commercial developers can offer higher rents to landowners. Municipalities do not own much land that is suitable for RE development.	The farmers' association could be a driver of Energy Gardens in Thuringia. Farmers have no experience in solar farm development, cooperatives have. These actors could join forces with a nature conservation association that wants to realize ecological value and thus one can reach a strong proposition. All of these actors need to be on the same line before they approach the municipality for funding. Another solution could be (as in the Netherlands) to look for estates, because they are interested in attracting visitors. Developing an Energy Garden might be a way to do so.	

Spinderwind

Table 14: Matrix chart used to steer the Peer learning activity

LEARNING REGION: (Thuringia/Germany)					
LIST OF PARTICIPANTS (all participants, see above)					
NAME OF FACILITATOR (Organization): Michael Krug (FUB)					
NAME OF RAPPORTEURS: (Organization): Rien De Bont & Erik Laes (TU/e)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lesson learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1) Intensive period of public consultation and engagement was organized, ahead of the official licensing process. This comprised intensive informal communication activities, several information meetings and home visits. This approach ensured a dialogue on equal footing and allowed for taking into account the public concerns in the application for a license. Several compromises were achieved to mitigate shadow flickering and one turbine was not built at all in order to avoid	Wind energy is often a highly contested/dividing issue in local communities in Thuringia. It will be difficult to find consensus. Landowners are often not rooted in the communities siting the wind farms and show low interest in developing community wind farms. Often developers inform municipalities and local residents rather late about their projects, after they have secured the sites and after they have already concluded contracts with the landowners. Information and procedural	Public acceptance is an issue also in Thuringia, projects often face opposition/resistance by the municipalities and/or local residents. Participation organized by local cooperatives can be a way to overcome this, but not in any case. Developers should be obliged to inform municipalities and citizens at an early stage. Some countries have such regulations (e.g., Norway, see the findings of the WinWind project).	The new Onshore Wind Energy Act envisages that the 16 federal states in Germany are required to designate more priority areas for wind energy (on average from 0.8% to 2% of the territory). Thuringia has to increase the share of land designated for wind energy to 1.8% by 2026 and 2.2% by 2032. Municipalities, landowners and residents should be pro-actively informed about the land areas to be designated

		<p>opposition. License was obtained without appeal to a higher court. In the region Hart van Brabant, the municipalities are currently working together to set up a project development bureau to stimulate investment in RE projects.</p>	<p>participation of local residents is formally only required if a wind farm has reached a certain size and an Environmental Impact Assessment (EIA) for a wind farm is necessary. Usually there are no obligations to early inform municipalities and citizens about their projects.</p>		<p>and the possibilities and benefits of developing wind farms in community (co-)ownership. ThEGA is already now quite active with its label for fair wind energy and its manifold dialogue and communication activities. These activities should be intensified and supported.</p>
		<p>a2) Union of 11 local cooperatives owns 50 % of the wind farm, and hence also has 50% of voting rights/decision power.</p>	<p>There are not so many local cooperatives in Thuringia. Official registration as a cooperative cost approximately 2,000 EUR per year. There are few wind energy projects where energy cooperatives are or will be financially involved.</p>		
		<p>a3) The Netherlands has an official (non-binding) political goal of 50% ownership by local actors in a local RE project.</p>		<p>There should be a policy imposing 50% local ownership. Connect to municipalities and encourage them to make rules on participation.</p>	<p>Check if the existing Label for Fair Wind Energy might be extended to include a similar guideline on local co-ownership. Consider introducing regulatory policy measures requiring a minimum share of local ownership following the Dutch example (see also the</p>

					experience of the federal state of Mecklenburg-West Pomerania that introduced a similar instrument). Consider introducing more requirements for developers to early inform municipalities hosting wind farm projects. Municipalities should inform and encourage landowners to take into account the option of developing wind farms with local (co-)ownership and to cooperate with local residents. Connect to municipalities and encourage them to set up rules on participation.
		a4) In 2012, the Municipality of Tilburg decided to map out how and where it would be possible to save energy and generate sustainable energy. One of the possible locations was the Spinder area near the Attero waste mountain on the site of the De Dommel water board. This is the	In Thuringia, wind farms can only be built in wind priority areas. These priority areas are designated by the regional planning communities in their regional plans. In these planning communities, municipalities are represented. Many of the priority areas have been early secured by professional project developers that	In Thuringia, an official quality label for wind power projects exists. This label is based on several guidelines developers have to fulfil, including criteria for local involvement of citizens. Municipalities could take a more active role in enforcing this	

		current location of “Burgerwindpark De Spinder”. In 2014, the municipality of Tilburg invited local energy cooperatives to play a role in the development and realization of a citizen wind farm.	can offer attractive rents to the landowners.	quality label upon new wind power developments.	
	b) legal forms				
	c) business models	c1) 50% of the wind farm is owned by citizens (represented by the 11 cooperatives), and hence 50% of the profits also go to the citizens (via the cooperatives)	The training session revealed that financing should not be a major problem in Thuringia. However, one has to bear in mind that citizens in Thuringia and other states in East Germany are generally less willing to invest money in a RE project than in other regions. This is partly because they are unaware of the possibilities, also partly due to the fact that income/savings levels in Thuringia and the other federal states in East Germany are lower.	Information campaigns in the neighbourhood of a wind project development could be organized to convince people of the advantages of investing in wind energy. Shares could be pre-financed by e.g., municipalities, so that low-income or vulnerable customers can participate.	
	d) cooperation models and financial participation possibilities for local authorities in RECs.	d1) The municipality does not participate directly (financially) in Spinderwind. However, in the region Hart van Brabant the municipalities are working together to set up a project development	The state government of Thuringia has recently set up a new citizen energy fund providing start up financing for citizen/community energy projects. The fund is designed as a revolving fund. But the problem is that the regulations	More specific guidance on the use of the citizen energy fund could be provided.	

	bureau to stimulate investment in RE projects.	do not yet clearly state for which ends the cooperatives and other initiatives that profit from the fund can use the money.		
Additional elements outside those indicated in the GA	-			

CVPP Loenen

Table 15: Matrix chart used to steer the Peer learning activity

LEARNING REGION: (COUNTRY)					
LIST OF PARTICIPANTS: all participants, see above					
NAME OF FACILITATOR (Organization): Arthur Hinsch, ICLEI					
NAME OF RAPORTEURS: (Organization): Rien De Bont & Erik Laes (TU/e)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lesson learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national	In the Netherlands, energy communities can apply for temporary exemptions from the electricity law to enable		In Germany, financial support is available for living labs (Reallabore) and regulatory sandboxes. Temporary rule	Check European, federal and/or state level R&D programmes and regulatory.

	transposition of the EU directives	experimentation with innovative solutions ("regulatory sandbox"). However, the initiative in Loenen did not apply for those exemptions.		exemptions are available, e.g. under the SINTEG programme. Existing federal and/or state level R&D programmes and regulatory sandboxes might help to implement cVPP pilot project.	sandboxes for possibilities to start a pilot project.
	b) legal forms				
	c) business models	-			
	d) cooperation models and financial participation possibilities for local authorities in RECs.	-		In Thuringia, there are few examples of DSO/municipal multi-utility companies cooperating with energy cooperatives (e.g., Stadtwerke Jena, Stadtwerke Nordhausen). Such constellations might serve as potential crystallisation points for cVPP concepts.	
	Additional elements outside those indicated in the GA	cVPP needs significant investments. You need to find scale, or you need to bring the cost down, for instance by open source EMS. You need to bring people to some level of understanding about the need for flexibility in the electricity system.	A key barrier in Thuringia is that only 2% of households are equipped with smart meters. Smart meter rollout covers only consumers with a consumption >6,000 kWh (based on a cost-benefit analysis). The rollout has even stopped right now due to court decisions. There are privacy concerns, but these are partly used	TU/e has developed a Mobilisation and Replication model. The model helps to explore whether and how a cVPP is a feasible solution for energy communities that want to play a more active role in the energy system. Communities in building their own cVPP.	The idea of developing a roadmap for Thuringia has been brought forward. ThEGA could only help by doing projects in small communities and communicate. Make use of a combination of smart city concept and

		<p>Loenen is only one form of cVPP, but what it will look like in the future nobody knows. The only way to do it is learning-by-doing. cVPP Loenen can be seen as a preparation for what is going to come, and is therefore not yet commercially viable (electric vehicles are not yet to scale, neither are heat pumps, etc.)</p>	<p>as a political motive. Smart meters are also rather expensive (annual metering costs of 100 EUR compared to 20 EUR for traditional metering).</p> <p>Access to balancing markets is highly restricted, just like in the Netherlands.</p> <p>Due to severe congestion problems and grid bottlenecks, DSO in NL are rather open to such concepts. DSOs in Germany (e.g. municipal multi-utility companies, Stadtwerke) are more self-reliant and often reluctant to cooperate with energy communities. They prefer to solve their problems by themselves.</p>	<p>Open source EMS systems are available in Germany.</p> <p>Some suppliers are offering dynamic tariffs.</p> <p>There are similar R&D and pilot projects already ongoing in Germany (e.g., PEBBLES, Elektrizitätswerke Schönaun).</p> <p>From a political perspective, solutions have to be found in the communication between producers and consumers.</p> <p>Politically, a smart meter obligation is needed. Also funds for people not able to afford all the expensive equipment needed to participate in a cVPP. A pilot project in Thuringia will be needed. There are potential crystallization points: in the town of Jena where a local energy cooperative is one of the minority shareholders of the municipal multi-utility company, there is a small neighbourhood of 600 residents that will need a new heating system in the near</p>	<p>regulatory sandbox (e.g., in Jena).</p> <p>Many providers step into the markets. You just need to be ready for the market.</p>
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				<p>future. The cVPP concept could be developed in such a neighbourhood since the idea would be to deploy to a large extent heat pumps.</p> <p>There might be a certain potential of promoting this concept as a solution for energy poor/vulnerable customers.</p> <p>However, these persons also tend to be very sensitive to the privacy argument.</p>	
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4.2 Italy

Table 16: Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Italy
Learning Region	Apulia
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	Belgium
Hosting Region	Flanders

The learning region, Apulia region, is located in the South of Italy (see Figure 15). The Apulia region is one of the most densely populated regions in Italy and has a total area of 19.541 km². Its territory is characterized by an elevated level of urbanisation and a population density above the national average. To date, two renewable energy communities (REC) have been developed in the learning region, namely in the municipality of Roseto Valfortore, in collaboration with the company Friendly Power srl, and in the municipality of Biccari, in collaboration with the energy cooperative “ènostra”. The focus of the transfer visit is on the renewable energy community in Roseto Valfortore (REC Roseto).

Roseto Valfortore is a rural municipality with 1.054 inhabitants, located in the Province of Foggia. In the Apulia region, the municipality of Roseto Valfortore has seen the largest development of wind power set up by large international energy and financial groups, often in collaboration with small or medium sized national companies.



Figure 15: Map of Italy and Roseto Valfortore

Source: google Maps @2022



● Roseto Valfortore

Figure 16: Map of Apulia Region and Roseto Valfortore

Source: <https://www.freeworldmaps.net/europe/italy/apulia.jpg> (Accessed on August 5, 2022)

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The learning region selected the renewable energy cooperative Ecopower as the good practice for the transfer activities. The offices of **Ecopower** are located in Berchem (nearby the city of Antwerp), in the province of Antwerp which is considered a model region for Belgium (Flanders) in the transfer exercise promoted within the COME RES project. However, the geographical coverage of Ecopower extends beyond the local level, as the energy cooperative carries out renewable energy projects and supplies green electricity across the Flemish region, and has renewable energy production installations across the entire Belgian territory. **Flanders (Vlaanderen)** is located in the northern part of Belgium (see Figure 16). The Flemish Region has a surface area of 13,522 km². On 1 January 2022 the Flemish Region had a population of 6.7 million inhabitants and a population density of 492 inhabitants per km². In 2020, the Flemish Region had a gross inland energy consumption of 420,278 GWh and renewable energy represented a share of 8.9% in gross final energy consumption.



Figure 17: Map of Belgium, with Flanders (Vlaanderen), province of Antwerp and city of Antwerp

Source: <https://www.worldatlas.com/maps/belgium> (Accessed on August 5, 2022) ©Worldatlas.com

4.2.1 Good/best practice transfer measures selected

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 social capital 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, 106GWh 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. Ecopower also invested capital in two district heating networks that will supply renewable heat to industry, businesses and to citizens. In addition to these energy production and supply activities, Ecopower also provides energy efficiency advice to its members and participates in various EU funded research projects (e.g. Interreg and Horizon 2020) on topics such as circular solar service models and Renovation and Renewable Energy Services (ESCo-model for cooperatives).

Table 17: Description of the Belgian Best Practice indicated by the learning region as the basis for capacity development and training workshops within Task 6.2.

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Belgium (Flanders)	Ecopower	A large-scale energy cooperative bringing together people investing in a variety of renewable energy technologies. It performs a broad range of activities: energy production & supply, energy efficiency, advice on new technologies for members, amongst other activities.	<p>The step-by-step 30-year growth process, from the initiators group to the Flanders-wide energy cooperative, which currently includes activities at the national scale to raise awareness with regards to climate change and promote citizen participation in the energy transition. The practice shows how the experienced cooperative develops and plans activities as well as how it collaborates with other energy cooperatives.</p> <p>The producer/supplier model could be interesting for other regions, especially if it succeeds in becoming a cheap energy supplier.</p> <p>Moreover, the legal form of a cooperative is well known and recognised. Relevant lessons can be drawn, particularly for already existing energy cooperatives.</p>

The learning region is particularly interested in the legislative, administrative and regulatory context for RECs in Flanders (compared to the Italian context), the evolution of the Ecopower business model (from start-up phase to current situation) and the engagement of local stakeholders (e.g. companies, citizens, municipalities), as there is considerable opposition, especially against wind farms, in the Apulia region.

Table 18: Details on the good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

Partner country	Learning region	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
Italy	Apulia	ENEA	Ecopower	<p><u>Regarding a)</u> governance structure, including gaps in the national transposition of the EU directives, there is the will to understand the differences in context between the mentoring and learning region.</p> <p><u>Regarding b)</u> legal forms <u>and c)</u> activities in the energy market and business models, Ecopower is an example of how citizen engagement and targeted communication about benefits/impacts can activate citizens in taking part in a REC and can grow year by year from a small citizen-led initiative to a successful cooperative.</p> <p><u>Regarding d)</u> The cooperation models and financial participation possibilities for local authorities were crucial in the start-up phase of and its further growth. The learning region wants to understand how it can move from the driving force role that municipalities must have in the start-up of a REC, to a reality in which the ownership of facilities and the form of cooperation of a REC is entirely in the hands of the citizens.</p>
<p>Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i>; b) <i>legal forms</i>; c) <i>Business models</i>; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i>.</p>				

The good practice Ecopower generates considerable socio-economic benefits for its members and the local community where it operates. Ecopower supplies green electricity at a lower price (1.6% market share of households). Moreover, when there is profit (all years since 2002, except for 2 years) a dividend goes to the members (legal maximum is 6%).

In terms of the employment effects, currently 54 people work for Ecopower. Its membership is open to people from different socio-economic backgrounds, including vulnerable and low-income groups. Moreover, Ecopower contributes to the reduction of energy poverty as it supplies green electricity at a lower price than traditional suppliers. Additionally, Ecopower is part of a research project with the city of Eeklo and Energent that focuses on lower-income groups.

Finally, Ecopower contributes to social awareness raising with regards to renewable energy and climate change, as it provides information and advice to its members on renewable energy, energy efficiency and the reduction of their energy consumption (the average consumption of their members is 50% lower than that of an average household in Flanders) and organizes social community activities, such as the Energy Cafés.

Table 19: Overview of socio-economic benefits of the Dutch best/good practice

Energy community	Participation/ ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
Ecopower	✓	✓	✓	✓	✓	✓	✓

4.2.2 Transfer Team participants in the activities

Several key stakeholders and market actors from the learning region have been recruited for the Transfer Team, including two experts from Friendly Power srl, a company that promotes, designs and manages RECs in Italy and Brasil, the president and a member of the REC in Roseto, the Mayor of the municipality of Roseto Valfortore. The project partners represented in the Transfer Team include ENEA, Ecoazioni, REScoop.eu and VITO/Energyville.

In addition, three experts from the good practice Ecopower are part of the Transfer Team. As such, the Transfer Team can rely on a balanced mix of technical, financial, social and legal competences and skills. Unfortunately the Mayor of the municipality of Roseto Valfortore and member of REC Roseto could not be present during the transfer visit due to personal reasons. The results of the transfer visit and training were shared with them afterwards.

Table 20: Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region	Mentoring experts from consortium and country of origin
Apulia Region (Italy)	Ecopower (Flanders, Belgium)	Gilda Massa (ENEA, researcher)	Michele Raffa (Friendly Power srl, president)	Erika Meynaerts (VITO, researcher)
		Massimo Bastiani (Ecoazioni, architect)	Vincenzo Raffa (Friendly Power srl, project manager)	Erik Laes (VITO, researcher)
		Virna Venerucci (Ecoazioni, architect)	Enzo Antonio D'Avanzo (REC Roseto, president)	Margot Vingerhoedt (Ecopower, communications manager)
			Antonio Ciampi (REC Roseto, member)	Jan de Pauw (Ecopower, project manager and energy advisor for city of Eeklo)
			Lucilla Parisi (Municipality of Roseto Valfortore, Mayor)	Dirk Vansintjan (Ecopower, founder and REScoop.eu, president)
				Stavroula Pappa (REScoop.eu, energy lawyer and project manager)

4.2.3 Agenda

Day 1 (8/06/2022): Plenary session and training

TIME	PROGRAMME
9.30 – 9.45	<i>Registration & welcome with coffee & tea</i>
9.45 – 10.00	All you need to know about the transfer visit <i>Erika Meynaerts (VITO)</i>
10.00 – 10.40	Regulatory and enabling framework for RECs - comparative assessment between Italy and Flanders <i>Stavroula Pappa (REScoop.eu)</i>
10.40 – 11.00	Q&A <i>Moderator: Erika Meynaerts (VITO)</i>
11.00 – 11.40	Introduction to Ecopower <i>Margot Vingerhoedt (Ecopower)</i>
11.40 – 12.00	Q&A <i>Moderator: Erika Meynaerts (VITO)</i>
12.00 – 13.00	<i>Lunch – provided by VITO</i>
13.00 – 14.30	Workshop: what did we learn? What is transferrable and how? (part I) <i>Facilitator: Gilda Massa (ENEA)</i> <i>Rapporteur: Erika Meynaerts (VITO)</i>
14.30- 15.00	<i>Walk in the nature reserve Wolvenberg (1.1 km)</i>
15.00 – 16.30	Workshop: what did we learn? What is transferrable and how? (part II) <i>Facilitator: Gilda Massa (ENEA)</i> <i>Rapporteur: Erika Meynaerts (VITO)</i>
16.30 – 17.00	Closure day 1 and introduction day 2 <i>Erika Meynaerts (VITO)</i>
17.00 – 18.30	<i>After training drink – provided by VITO</i>
<i>Free evening</i>	

Day 2 (9/06/2022): Transfer visit

TIME	PROGRAMME
9.00	<i>Pick up at hotel for transfer to watermill (Rotselaar) (1 h drive)</i> <i>Park Inn by Radisson Antwerp Berchem</i> <i>Borsbeeksebrug 34, 2600, Berchem</i>
10.15 – 10.45	Collaboration Ecopower – City of Eeklo <i>Jan De Pauw (digital presentation) (Ecopower)</i>
10.45 – 11.15	Q&A <i>Moderator: Erika Meynaerts (VITO)</i>
11.15 – 12.30	Guided tour watermill (with Q&A) <i>Dirk Vansintjan (REScoop.eu/Ecopower)</i>
12.30 - 13.30	<i>Lunch – provided by VITO</i>
13.30 – 14.30	Closure day 2 -finetuning/adapting workshop results day 1 based on lessons learned day 2 <i>Erika Meynaerts (VITO)</i>
<i>Transfer to Berchem (1 h drive)</i>	
<i>Free afternoon & evening</i>	

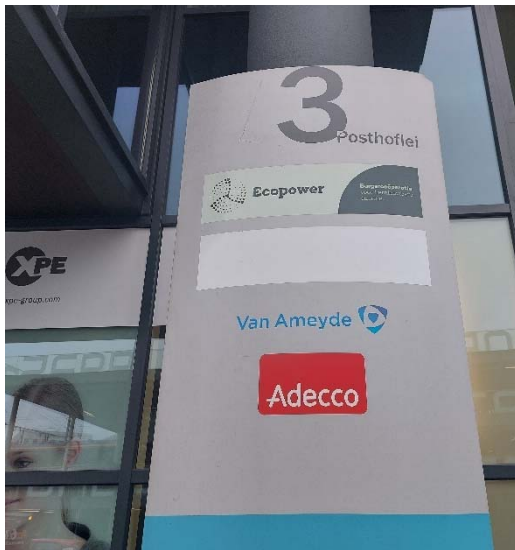


Figure 18,19: Plenary Session to Ecopower

Source: @Ecoazioni

4.2.3 Training visit

The training visit focused on the first projects of Ecopower, issued by the city of Eeklo that allowed Ecopower to build 3 wind turbines in 2001-2002.

Within the planned 1 and a half day construction schedule we were unable to travel to Eeklo, as we did to Rotselaar. For the visit to the site, the Rotselaar water mill was chosen which is the origin of the energy cooperative. Dirk Vansintjan (one of the founders of Ecopower and president of REScoop.eu) took a guided tour of the water mill and explained how the initiative was started (see Figure 16).



Figure 20, 21: Guided tour in the watermill of Rotselaar

Source: ©Erik Laes, @Ecoazioni

Jan De Pauw (employee of Ecopower and energy advisor at the city of Eeklo) gave a presentation about the different projects of Ecopower in Eeklo that were developed in close collaboration with the city.

Table 21: Fiche presenting the good/best practice part of the transfer activity

Ecopower (Flanders, Belgium - Rotselaar) (water)	
Location	Rotselaar
Owner	Ecopower
Installation date	The present water turbine dates from 1902 and produced electricity between 1907 and 1967. It was thoroughly restored in 1994 and, since 1995, it produces again green electricity. Since 2004, Ecopower is the owner of the small-scale hydro power plant.
Plant's installed capacity	75 kW
Plant annual production	500,000 kWh (equivalent to 250 Ecopower households)
CO₂ saving	195 tonnes of CO ₂ /year
1. DESCRIPTION	The small-scale hydro power plant produces green electricity. The residual heat from the power plant is used to heat the walls of the visitor centre. The protected monument also houses a cohousing project with nine houses, a mill museum, a shop with organic vegetables, a bakery and a distribution point for food teams.
2. PLANT'S CHARACTERISTICS	<ul style="list-style-type: none"> • Phoenix Turbine • Year: 1902 • Fall height: 2.40 m • Flow rate: 5 m³/s • Investment by Ecopower: 325,000 euros • Number of shares: 1,300
3. RESULTS OBTAINED	<ul style="list-style-type: none"> • A local RES project can create local added value and additional social and environmental benefits for the local community e.g. co-housing, shop with organic vegetables, bakery, food teams, collecting waste from the river. • Showcasing good practices and demonstrating the benefits, and local added value of a local RES project can increase support and engagement from local market actors and citizens and can trigger new initiatives.
4. OTHER OBTAINED CHARACTERISTICS	<ul style="list-style-type: none"> • The first project of Ecopower is small in terms of size and production but has a symbolic value for Ecopower as it goes back to the origins of the cooperative as a citizen led initiative.

- It triggered the take-off of new citizen led initiatives in the municipality of Rotselaar and neighbouring municipalities. One of the initiatives managed to convince the multinational Danone to make the roof of the factory in Rotselaar available for investments in PV panels by the citizens.
- It was very difficult to convince traditional banks to invest in the first projects of Ecopower. Nowadays, banks stand in line to invest in the wind projects of Ecopower as the cooperative has become an established value in the energy sector. Nevertheless, Ecopower finances its projects as much as possible with social capital. At the moment, Ecopower has more capital raised than it has projects to invest in and so there is no need for bank loans.



Figure 22: Water mill in Rotselaar

Source: <https://www.ecopower.be/over-ecopower/productie-installaties/kleine-waterkracht-rotselaar> (3/06/2022)

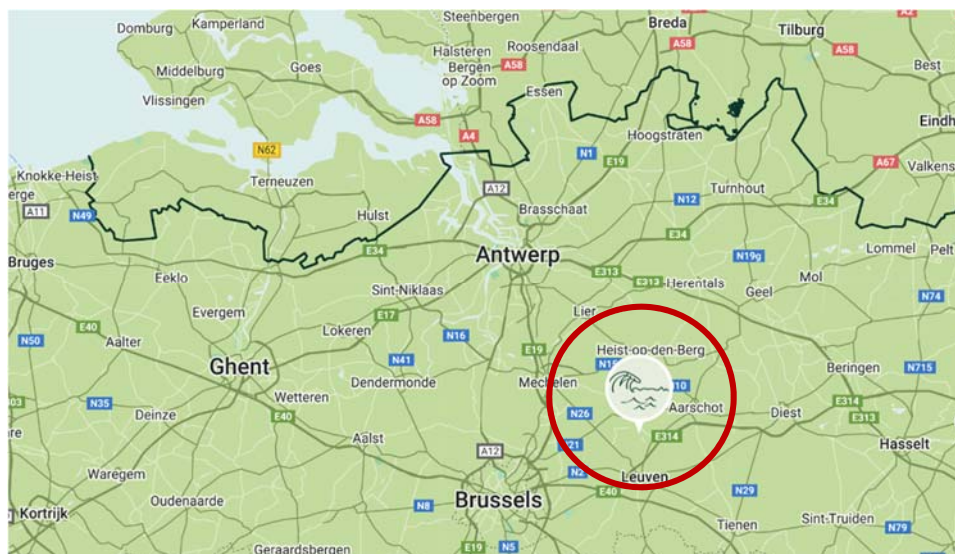


Figure 23: Location of water mill

Source: <https://www.ecopower.be/over-ecopower/productie-installaties/kleine-waterkracht-rotselaar> (3/06/2022)

Table 22: Fiche presenting the good/best practice part of the transfer activity

Ecopower (Flanders, Belgium - Eeklo) (wind)	
Location	Eeklo
Owner	Ecopower
Installation date	2001
Plant's installed capacity	2 x 1.8 MW (Enercon E66) and 1 x 600 kW (Enercon E40).
Plant annual production	total 3 wind turbines: 7,400,000 kWh (equivalent to 3,700 Ecopower households)
CO₂ saving	2,900 tonnes of CO ₂ per year
1. DESCRIPTION	<p>Eeklo 1 was Ecopower's very first wind project. It comprised also the largest wind turbines at that time in Flanders. Two wind turbines were located on an industrial site. The third wind turbine was located near the football field. These locations were selected by the city of Eeklo which was the very first city in Flanders to develop a vision on the implementation of wind turbines on its territory. Eeklo made the land available for the wind turbines and organized a tendering procedure. Ecopower won the tender and the citizens of Eeklo provided the social capital - together with many committed citizens from all over Flanders. The development of the wind turbines did not receive a single objection, thanks to the clear vision of the city of Eeklo and direct citizen participation. In June 2021, the three wind turbines were taken down after almost 20 years of service.</p>

2. PLANT'S CHARACTERISTICS	Investment by Ecopower: 4,090,000 € Number of shares: 16,360
3. RESULTS OBTAINED	<ul style="list-style-type: none"> • Clear vision of the city on implementation and future development of RES on its territory creates a stable, regulatory framework for local RES projects and increases trust in the local authority (e.g. wind plan of city of Eeklo (1999) based on principles such as wind as a common, wind as a local product, public locations, direct participation of citizens, local added value). • Tender criteria as an enabler for collaboration between the city and citizen cooperatives. Criteria in wind tender in Eeklo (1999 and 2009) <ul style="list-style-type: none"> ◦ 25k€/year remuneration for leasehold estate ◦ added value for city and citizens ◦ up to 50% citizen participation (with reference to ICA definition & principles). • City council decision (Eeklo 2013) with participation of citizens up to 50% as an enabler for collaboration between the city and citizen cooperatives. • Wind turbine as an opportunity for professionalization of cooperatives (one vs many). • Look in your backyard first for opportunities for RES projects (e.g. public roofs and land). • Citizen participation as a way to minimize resistance and maximise added value within the community. • Direct participation of citizens contributes to ownership and engagement, local anchoring of the RES project and local added value, energy democracy and autonomy. • Showcasing good practices boosts the cooperative movement (increases the amount of social capital raised) and support for local RES project (reduces number of appeals against permits).
4. OTHER OBTAINED CHARACTERISTICS	<ul style="list-style-type: none"> • Wind sharing as a means for participation of target groups/vulnerable consumers, cf. H2020 Power Up project with case in Eeklo (https://powerupproject.eu/). • The first wind turbines in Eeklo started off the local energy transition. As a result, 5 of the 8 wind turbines that were operational in 2012 were cooperative wind turbines (without any opposition); in 2022 Eeklo is 100% supplied by the 22 wind turbines on its territory. • The local RES projects and increased energy-efficiency in Eeklo contribute significantly to the realisation of the CO₂-reduction target set in frame of the Covenant of Mayors: by 2030 Eeklo will reduce its CO₂-emissions by 65%. The CoM

can be a framework/context in which RECs and local authorities can collaborate.

- Ecopower has more than 65.000 members; >70% of the members has only one share of 250 euros and 80% of the members uses the energy at their homes. Members of Ecopower use less energy than an average household in Flanders - being part of an energy cooperative makes citizens more aware of their energy consumption.
- Cooperatives are considered as part of the social economy by the European Commission.



Figure 24: Location of first wind turbines in Eeklo

Source: <https://www.ecopower.be/over-ecopower/productie-installaties/eeklo-1> (Accessed on 3/06/2022)



Figure 25: One of the three wind turbines in Eeklo (near the football field)

Source: <https://www.ecopower.be/over-ecopower/productie-installaties/eeklo-1> (Accessed on 3/06/2022)

4.2.4 Training Module

The training module started with a plenary session (see Figure 21) that encompassed presentations by the mentoring experts of the consortium (VITO/Energyville) and country of origin (REScoop.eu and Ecopower). The plenary session was organized in a very interactive way. The presentations were a starting point for an interactive discussion and knowledge exchange between the mentoring experts and the learning region participants.



Figure 26: Plenary session with presentation of the good practice Ecopower

Source: ©Erika Meynaerts

Erika Meynaerts, researcher at VITO/Energyville welcomed the participants and gave an introductory presentation in which the COME RES project, the work package 6 activities and the 1.5-day programme were briefly explained.

After the introduction, Stavroula Pappa, an Energy Lawyer and Project Manager at REScoop.eu, presented REScoop.eu and explained the cooperative principles. Reference was made to a study of CE Delft from 2016 that illustrates the potential for citizen participation (“by 2050, at least half of EU citizens could be producing their own renewable electricity, meeting 45% of the total electricity demand by then”). The concepts of energy communities (CEC and REC) were explained and compared. Main conclusions of this comparison:

- Energy communities can help deliver EU energy and climate objectives, while delivering social innovation at the local level.
- Energy communities are conceptually defined as non-commercial market actors and an organizational/social concept.
- Energy communities are not framed around a specific activity. The organizational model can be applied to different activities across the market.
- Principles in the definitions are meant to be applied according to context at national level.
- It does not end with a concept. Definitions need to be coupled with enabling frameworks and a level playing field.

The status of the transposition of the regulatory and enabling framework for RECs was discussed for Italy and Flanders (Belgium). Main conclusions of this discussion:

- The definitions of CEC and REC are transposed in both countries and specification is provided by means of by-laws.
- It is not clear if an assessment of barriers and potentials for RECs has been carried out. If such an assessment has been carried out, it has not been made public.
- Both countries are taking action to implement the enabling framework and to take RECs into account in the design of support schemes. However, the process is slow and not transparent.

The good practice was presented by Margot Vingerhoedt (in Italian), communications manager at Ecopower. The presentation focused on the history of Ecopower, the triggers for growth and challenges and the strategic choices for the future (2030). Main conclusions:

- Triggers (enablers) for growth: Concrete project(s), supplier (or any other selling points), timing / context, cooperation (with other communities/cooperatives, local governments, civil society, research organizations, etc.).
- Challenges: growth (or depth!), choices (you can't do everything!), balance (financial / social / ecological), procedures, structure, ICT-integration, evolution of context (market, legislation, society).
- Strategic choices: investing in larger projects, developing district heating networks, future proof electricity supplier (flexibility, grid balancing), social aspects of the energy transition (energy poverty), reflection of society (youth, gender, socio-economic diversity).

The training module was set up as an interactive workshop (see Figure and was facilitated by ENEA, the consortium partner from the learning region, to give the visitors the opportunity to have a discussion in their own language (and avoid language barriers). The consortium partner of the country of origin, VITO/Energyville, took up the role of reporter.

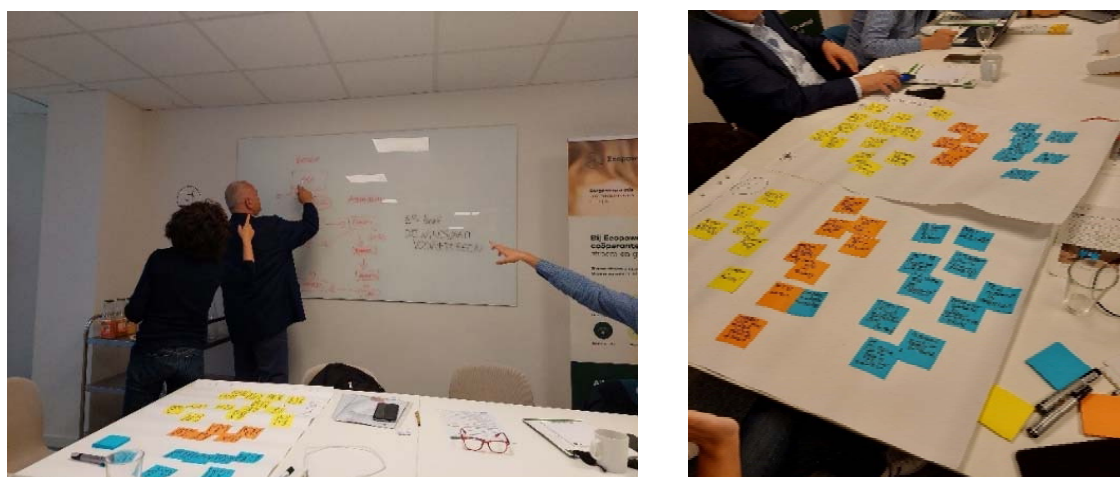


Figure 27, 28: Interactive workshop with post-its and whiteboard

Source: ©Erika Meynaerts

First, the participants were asked to validate the input provided prior to the transfer visit and training on the main transfer elements: What are the needs expressed by your region and the main elements (considering local barriers) that can be addressed through the transfer activity?

- There is a lack of information/data at different levels for starting up a REC. For example, information about the grid structure to find high/medium voltage station is poor and slowly received.
- (R)ECs are discriminated on the energy market compared to commercial/big players.
- There is a strong opposition on the part of the general public in the Apulia region to wind turbines. The socio-economic and environmental benefits of becoming a REC are not evident to citizens.
- There is no clear vision on the value proposition of an (R)EC. (R)ECs are not for profit and as such not bankable and they do not get a loan. Traditional banks want the guarantee that members of (R)EC participate for 10 – 20 years but membership of a (R)EC has to be voluntary.

The following lessons learned resulted from the transfer visit and training, and will be the starting point for identifying specific actions in the transfer roadmap:

- The financial form/business model and legal form of a REC go hand-in-hand. REC Roseto is initiated by the municipality (as local authorities receive subsidies in Italy for investment in the production installations of a REC) and managed by a commercial company. Given the difference in context and legal form, the transferability of the business model of Ecopower to REC Roseto is limited.
- Communication channel with the DSO needs to be strengthened and suitable forums for dialogue need to be created to make the authorization process more transparent and less time consuming. To facilitate the authorisation process, access to relevant information and (high quality) data should be improved.
- RECs should act collectively instead of individually to create critical mass (e.g., in the dialogues with policy makers and DSO) and economies of scale (by sharing e.g. resources and knowledge).
- Creation of specific expertise on the subject in the territories where the RECs are to be established.
- Use concrete projects to showcase success stories and benefits of a REC and to build trust/support for local RES projects.
- Direct participation of citizens in the REC contributes to ownership and engagement, local anchoring of the RES project and local added value, energy democracy and autonomy.
- Clear vision of the municipality on implementation and future development of RES on its territory creates a stable, regulatory framework for local RES projects and increases trust in the local authority.
- Start thinking in an early stage about the organizational structure of the REC (e.g., controlling body, procedures, ICT integration).

Table 23: Matrix chart used to steer the Peer learning activity

LEARNING REGION: (COUNTRY)					
LIST OF PARTICIPANTS (names and organization)					
NAME OF FACILITATOR (Organization): Gilda Massa (ENEA)					
NAME OF RAPPORTEURS: (Organization): Erika Meynaerts (VITO) and Gilda Massa (ENEA)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lessons learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1) administrative process with energy supplier; connection of local production with national grid	Administrative barriers, bureaucracy and legislative barriers (e.g. Request for grid connection as an (R)EC is not possible if you do not own the PV installation or the roof; it takes almost 4 years to get a permit for a wind turbine). Lack of information at different levels (e.g., about grid structure to find high/medium voltage station, procedure and data). No transparent administrative process with clear timeline (e.g., waiting several months for one administrative step to be finalised).	<ul style="list-style-type: none"> - One-stop-shop - Support from association of municipalities and cities, working group on energy communities. - Public register of (R)EC (e.g., in Flanders). - Start thinking in an early stage about procedures, structure, ICT integration (e.g., controlling body) – not too much structure so you do not kill the initiative! (Person based → organization based). 	<ul style="list-style-type: none"> - Communication with DSO should be strengthened/improved. - Access to relevant information and (high quality) data should be improved. - Act collectively to create critical mass. - Creation of specific expertise on the subject in the territories where the RECs are to be established. - Start thinking about organizational structure.
				<ul style="list-style-type: none"> - Concrete projects to showcase success stories (e.g. bus tours to wind 	<ul style="list-style-type: none"> - Showcase success stories and highlight benefits

		a2) citizen engagement (and SME) in local RES production	Strong opposition against wind turbines.	<p>turbines in Eeklo; guided tour of water mill in Rotselaar) and to build trust/support for local RES projects.</p> <ul style="list-style-type: none"> - Stakeholder/citizen engagement starts from: what is in it for them? What do they need? Do not assume that they are interested in energy (e.g., supplier activity as a response to the need of citizens) - Clear vision of the city on implementation and future development of RES on its territory creates a stable, regulatory framework for local RES projects and increases trust in the local authority (e.g., wind plan of city of Eeklo based on principles such as wind as a common, wind as a local product, public locations, direct participation of citizens, local added value) 	- Clear vision of municipality on implementation and future development of RES on its territory to increase trust.
		a3) national /regional legal framework	Discrimination of (R)EC compared to commercial/big players on the energy market	Act collectively instead of individually (lobby) (e.g., REScoop Flanders, working group Lombardy)	Act collectively to create critical mass

		a4) unite different interests of different stakeholders			
	b) legal forms	<i>b1) cooperative model</i>	<p>The benefits of becoming a REC are not evident to the citizens</p> <p>No evidence of environmental sustainability</p>	<ul style="list-style-type: none"> - Financial form/business model and legal form go hand-in-hand - Members of Ecopower use less energy than an average household in Flanders - being part of an energy cooperative makes citizens more aware of their energy consumption. - Cooperatives are considered as part of the social economy by the European Commission - Citizen participation as a way to minimize resistance and maximise added value within the community - Direct participation of citizens contributes to ownership and engagement, local anchoring of the RES project and local added value, energy democracy and autonomy 	
	c) business models	c1) business model (start-up & further improvements) e.g., implementation barriers and solutions, (local) benefits	No clear vision on the value proposition of a REC.	<ul style="list-style-type: none"> - Context/timing: keep track of legislation, market regulation and social norms (people are more/less open to dialogue) 	Act collectively to create economies of scale

		<p>(environmental, social, employment)</p>	<p>(R)EC are not for profit and as such not bankable, they do not get a loan. Traditional banks want the guarantee that members of (R)EC participate for 10 – 20 years but membership = voluntary</p>	<p>(e.g. wind turbines in Eeklo – Ecopower and city of Eeklo shared the same vision)</p> <ul style="list-style-type: none"> - Act collectively instead of individually (economies of scale) (e.g. collaboration with new cooperatives that want to develop a wind turbine – Ecopower shares knowledge/expertise) - Keep the balance between financial, social, and ecological impacts. local RES project can create local added value and additional social and environmental benefits (e.g., co-housing, shop with organic vegetables, bakery, food teams, collecting waste from the river (Dijle)) - Monitor and report “other” impacts (e.g., annual report includes euros invested and kWh produced but also number of exchanges with other cooperatives) - Make choices as you cannot do everything (e.g., by drafting a strategic vision) 	<p>Monitor and report impact/benefits</p> <p>Monitor context - check if Covenant of Mayors (local CO₂ and RES targets) can be used as enabler for engaging municipalities, local market actors and citizens in RECs</p>
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				<ul style="list-style-type: none"> - You do not have to grow in size, but you can also go into depth (consolidate) - Wind turbines as an opportunity for professionalization - Look in your backyard first for opportunities for RES projects (e.g., public roofs and land) 	
	d) cooperation models and financial participation possibilities for local authorities in RECs.	d1) collaboration with local authorities and other relevant actors (such as SME)		<ul style="list-style-type: none"> - The Covenant of Mayor can be a framework/context in which RECs and local authorities can collaborate as local RES projects and increased energy-efficiency contribute significantly to the realization of the CO₂-reduction targets. - Tender criteria as an enabler for collaboration between the city and citizen cooperatives. - City council decision with participation of citizens up to 50% as an enabler for collaboration between the city and citizen cooperatives 	
	Additional elements outside those indicated in the GA	Not applicable	Not applicable	Not applicable	Not applicable

4.3 Latvia

Table 24: Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Latvia
Learning Region	Latvia
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	Italy
Hosting Region	Piedmont

The **learning region, Latvia** has a total area of 64.6 thousand km² and population of around 1.9 million people, of which about 80% live in urban (densely populated) areas and 20% in rural (sparsely populated) areas. The main land uses are agriculture (~ 35%) and forestry (~ 50%).

Current administrative territorial division consists of 43 municipalities: (i) 7 state cities (*valstpilsētas*) and (ii) 36 counties (*novadi*). There are no regional (2nd level) authorities in Latvia. There are 5 planning regions (legal status - derived public person), main task of them is to perform regional development planning and spatial planning.

Today (2020), the dominating energy sources in the supply of energy are: oil products (~32%, mainly used in the transport sector); natural gas (~21%, mainly for generating electricity and heat in CHPs); biomass (~36.5%, mainly for heating in different end-use sectors). The share of RES has grown from 31% (2000) to 42.1% (2020).

Regarding electricity sector, in 2021 the total RES installed capacity was 1823 MW (corresponding to 3718 GWh electricity produced annually). The dominating share (~70% of RES electricity produced) corresponds to the large-scale hydro power plants (the Daugava River cascade), while the rest is provided by other RES plants and technologies. Latvia's NECP2030 plans to increase the installed capacity of wind turbines and solar PV. The development of solar PV has started in the last decade and follows a stable increasing trend in all end-use sectors, with the current solar PV capacity being around 44 MW (both large-scale installations and micro-generation plants).

There is no quantitative target for RES community energy, at national level. The establishment of the legal framework for RECs is provided by the Amendments of the Law on Energy and the Amendments on the Energy Market Law, both adopted in 14th July 2022. The governmental regulations to detail the procedures should be issued up to 28th February 2023, and the Guidelines for the Formation of Energy Communities, including the recommendations for public authorities, up to 30th June 2023.

The **good practice** Energy City Hall-1 is in **Piedmont Region**, Italy, and has been established by the Public Administration of Magliano Alpi municipality on December 18th 2020. This town counts 2,230 inhabitants, with an area of 32.6 km² inside the province of CUNEO. It is a small agricultural centre, located on the outskirts of Mondovì. Magliano Alpi is divided into three hamlets: Magliano Soprano (where the railway station is located), San Giuseppe (where the village centre is located) and Magliano Sottano.

The Municipality of Magliano Alpi is the coordinator and main prosumer of the REC. It has made available a 20 kWp photovoltaic system, installed on the roof of the Town Hall and on a public building

called housing evolution hub. Currently, members of the REC are the Municipality of Magliano Alpi and public and private consumers (including five families, a library, schools, and a gym) who benefit from different community services. The mayor is the president of the REC community, which helps to increase confidence in the initiative that is replicating itself as a model in other contexts.

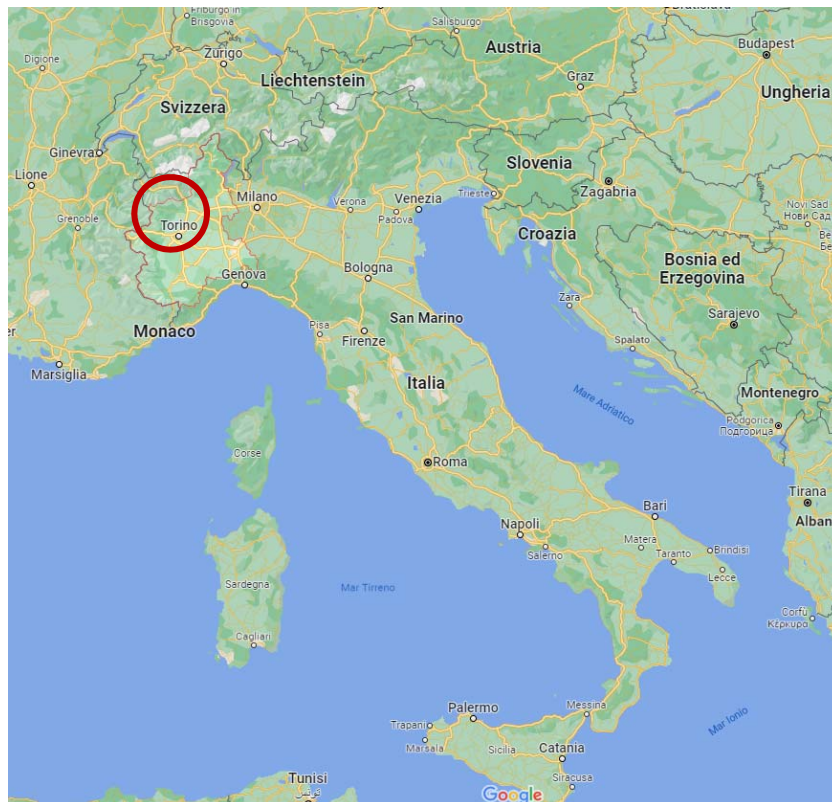


Figure 30: Map of Piedmont Region. Source: Google maps

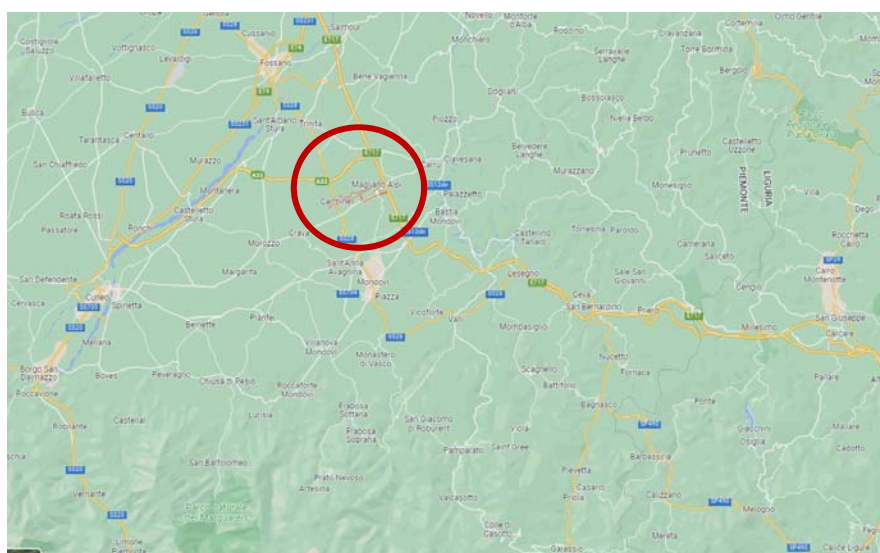


Figure 31: Map of Cuneo Province and Municipality of Magliano Alpi. Source: Google maps

The creation of Energy City Hall REC started in April 2020 when the “Manifesto of the Energy Communities for an active centrality of the Citizen in the new energy market” was promoted by the Energy Centre of the Polytechnic of Turin and the City Council of Magliano Alpi joined to it.

The Municipality of Magliano Alpi, with an initial investment of 100k€, financed the PV installation on the roof of the town hall and bought the smart meters to collect and manage data from points of delivery (PODs) of the REC members. The REC of Magliano Alpi is now a catalyst for “local short supply chains”, with high added value and strong cognitive and technological value. In fact, in the REC not only private citizens are involved, but also small entrepreneurs (e.g. local technicians and artisans) precisely to spread this message, making sure to attract a wider audience of people and create a narrative that is an engine of change towards a “green” economy.

4.3.1 Good/best practice transfer measures selected

Table 25: Description of the Italian Best Practice indicated by the learning region (Latvia) as the basis for capacity development and training workshops within Task 6.2.

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Italy (Magliano Alpi in Piedmont Region)	Energy City Hall REC-1	<p>An Association founded in 2020 and led by the Mayor of Magliano Alpi. As coordinator and prosumer of the REC, the Municipality of Magliano Alpi has made available a 20 kWp photovoltaic system built after 1 March 2020.</p> <p>Installed on the roof of the Town Hall, the system is connected to the electricity withdrawal point of the Town Hall and can share the energy produced, and not self-consumed, with the remaining REC members. Two EV charging stations will also be connected to the same system, which can be used free of charge by any resident.</p>	<p>The governance structure and the central role of the municipality are elements of interest, as well as the business model and the IOT platform with which the energy production and consumption data, including energy sharing data, are managed.</p> <p>In a transferability plan, it will be necessary to consider not only the strengths of the ENERGY CITY HALL project, but also the opportunities and limitations, as external factors, in which the model needs to be adapted. National or regional legislations are elements on which a transfer activity cannot act as a direct lever. Instead, the project will be able to directly enforce the strengths that characterize it.</p>

Table 26: Details on the good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

Partner country	Learning region	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
Latvia	Latvia	ENEA – LEIF, Another Latvian partner involved - IPE	ENERGY CITY HALL REC1	Referring to a) two aspects will be analysed: a1 transposition of RED II, particularly definitions and rights of RECs collective self-consumption ; a2) enabling framework for RECs Referring to b) and c) new business models for energy cooperatives and other community energy initiatives
Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i> ; b) <i>legal forms</i> ; c) <i>Business models</i> ; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i> .				

Table 27: Overview of socio-economic benefits of the Italian best/good practice

Energy community	Participation/ ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
Energy City Hall REC -1	✓	✓	✓		✓		

4.3.2 Transfer Team participants in the activities

Table 28: Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region (Give an explanation why the particular stakeholder/market actor has been selected, scope of working field)	Mentoring experts from consortium and country of origin
Latvia	Energy City Hall REC 1 (Magliano Alpi, Italy)	Aija Zucika (LEIF)	Āris Ādleris (The Latvian Rural Forum, particularly the initiative "Smart villages")	Gilda Massa (ENEA)
		Ivars Kudreņickis (IPE)	Ģirts Dubinskis (The local cooperative of apartment owners of residential buildings)	Paola Amato (Ecoazioni)
			Karīna Miķelsone (Deputy Chairperson in matters of development, Municipality of Ādaži)	Fabio Armanasco (RSE)
			Rota Šņuka (The Public Utilities Commission)	Gabriella De Maio (IFEC)
			Aigars Štāls (representative of citizen interest group)	Maurizio Sasso (Unisannio)
			Līga Rozentāla (Department Director, Ministry of Economics)	Cotugno Angelo (City of Matera)
			Valdis Ratniks (Head of the Energy Efficiency Center of the Riga city energy agency)	Emiliano Mian (RES Comunità collinare del Friuli)
			Ilgvars Francis (expert, (Riga planning region).	

4.3.3 Agenda

Day 1 (28/06/2022): Plenary session and training

TIME	PROGRAMME
9:00 -9:15	Registration & welcome coffee
9.15 – 09.30	Welcome by the Mayor of Magliano Alpi – <i>Marco Bailo</i>
9.30 – 9.45	The COME RES project and all you need to know about the transfer visit <i>Gilda Massa (ENEA)</i>
9:45 -10:00	Presentation of the “ <i>Manifesto of the Energy Communities</i> ” by the Energy Centre of the Politecnico di Torino: a shared vision on energy communities as the catalyst of a bottom-up approach to energy transition that led to Magliano Alpi’s endeavour – <i>Sergio Olivero (Energy Center Polito)</i>
10.00 – 10.30	Regulatory and enabling framework for RECs- the REDII directive in Italian regulatory framework <i>Gabriella De Maio (Italian Forum for Energy Communities)</i>
10.30 – 10.50	Q&A <i>Moderator: Gilda Massa (ENEA)</i>
10.50 – 11.20	The Energy City HALL – 1 project and the Magliano Alpi’s Renewable Energy Communities (RECs) <i>Sergio Olivero (President Comitato scientifico REC Magliano Alpi)</i> <i>Luca Barbero (coordinator Grocer)</i>
11.20 – 12.30	Presentation by Cities who are replicating Magliano Alpi’s approach: Cities of Matera - <i>Angelo Raffaele Cotugno</i> CER Collesalveti - <i>Isabella Buttino</i> CER Comunità Collinare del Friuli - <i>Emiliano Mian</i>
12:30 – 13:00	Q&A <i>Moderator: Gilda Massa (ENEA)</i>
13.00 – 14.00	<i>Light Lunch – provided by ENEA</i>
14.00 – 15.30	Workshop: what did we learn? What is transferrable and how? (Part I) <i>Facilitator: Sergio Olivero (Polito) / Gilda Massa (ENEA)</i> <i>Rapporteurs: Aija Zucika (LEIF) & Gilda Massa (ENEA)</i>
15.30- 15.45	<i>Coffee break</i>
15.45 – 16.45	Workshop: what did we learn? What is transferrable and how? (part II) <i>Facilitator: Sergio Olivero (Polito) / Gilda Massa (ENEA)/Paola Amato (Ecoazioni)</i> <i>Rapporteurs: Aija Zucika (LEIF) & Gilda Massa (ENEA)</i>
16.45 – 17.00	Closure day 1 and introduction day 2 <i>Gilda Massa (ENEA)</i>
19.30	<i>Social Dinner</i>

Day 2 (29/06/2022): Transfer visit

TIME	PROGRAMME
9.15 -9:30	Registration & welcome with coffee & tea
9.30 – 11.00	what did we learn? How to overcome specific barriers? <i>Facilitator: Sergio Olivero (Polito) / Gilda Massa (ENEA) / Paola Amato (Ecoazioni)</i> <i>Rapporteurs: Aija Zucika (LEIF) & Gilda Massa (ENEA)</i>
11.00 – 11.30	Finetuning/adapting workshop results <i>Gilda Massa (ENEA) / Sergio Olivero (REC Magliano)</i>
11.30 – 12.30	<i>Walking session in the City of Magliano</i>
12.30 - 13.30	<i>Light Lunch – provided by ENEA</i>
13.30 – 14.30	Closure of the event <i>Aija Zucika (LEIF) & Gilda Massa (ENEA)</i>
<i>Free afternoon & evening</i>	

4.3.4 Training visit



Figure 32: Transfer visit participants in the front of the PV installations. Source: @ A.Zucika

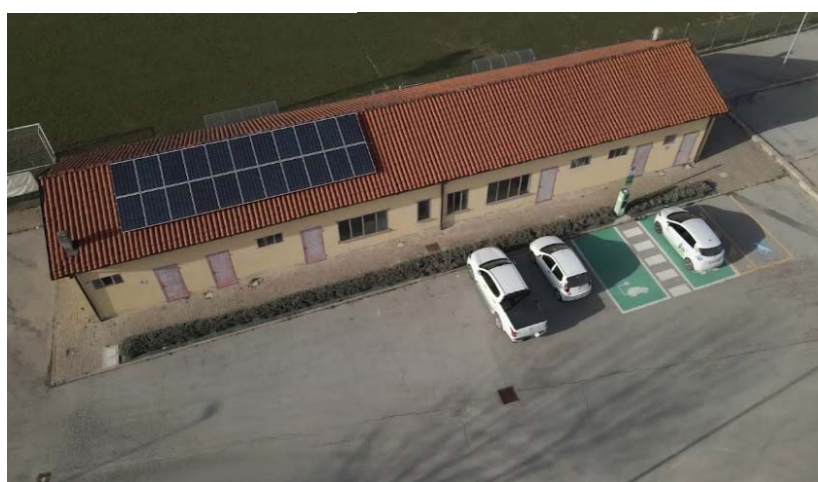


Fig. 33, 34: Bird view of PV installation on City Hall. Source: website City of Magliano Alpi

The training visit focused on the installed PV panels and electric vehicles (EV) charging stations, and on the analysis of IoT energy data management system. A 20 kW photovoltaic system is installed on the roof of the Town Hall; the system is connected to the POD of the Town Hall and can share the energy produced and not self-consumed within the remaining REC members. The two EV charging stations will also be connected to the same system, and residents will be able to use them free of charge. The Municipality bought the smart meters, which are linked to the PODs of all the consumers participating in the REC. In parallel with the calculations of the shared energy that GSE, the Italian DSO, will provide, a dedicated management platform will provide the analysis of production and consumption energy flows and the management of all energy services.

Table 29: Fiche presenting the good/best practice as part of the transfer activity

Energy City HALL REC 1 (Magliano Alpi , Piedmont - Italy) (solar)	
Location	Magliano Alpi
Owner	Municipality
Installation date	June 2021
Plant's power	20 kWp
Plant annual production	22.000 kWh – 30.000kWh
CO2 saving	13.000 kg -18.000kg
1. DESCRIPTION	The PV Plant is composed of 60 PV modules and two inverters. The PV modules installed have a Peak Power of 330Wp and are manufactured according to IEC 61215, IEC 61730 standard and CE. Cells are larger, with 5 busbars and built according to the new high efficiency PERC technology and are designed and manufacture in Italy. Each PV Model is composed of 60 cells typo mono square PERC with a temperate AR Coated front glass of 3.2mm
2. PLANT'S TECHNICAL CHARACTERISTICS	Each PV module has: VoC 40.20V, Vmp 34.50V, Isc 10.10A, Imp 9.59A, PMax 330Wp, Efficiency 19.84% and can operate in a range of -40°C+85°C
3. RESULTS OBTAINED	<ul style="list-style-type: none"> The REC implemenmtation led to an increase in the local RES projects and in energy-efficiency in Magliano Alpi, contributing significantly to the realisation of the CO₂ reduction target declared in the Manifesto. A model based on five steps for REC feasible implementation was developed.
4. OTHER OBTAINED CHARACTERISTICS	<ul style="list-style-type: none"> The model of Magliano Alpi is being replicated in the area, within the region and in other parts of Italy (City of Matera in Basilicata Region, Municipality of Collesalveti in Toscana Region, 15 municipality in Friuli Region represented by Comunità Collinare del Friuli).

4.3.5 Training moduels

Transfer visit preparatory phase in Latvia

On 9th June 2022, LEIF and IPE organized an online meeting of the transfer visit with Latvia's participants. The participants expressed their specific interests for the transfer visit and aspects/factors they would like to be covered. The questions and opinions of the participants were summarised by LEIF and were to send to ENEA (Gilda Masa) as the organizer of the visit.

The full description of the Energy City Hall REC-1 cases, included in the COME RES Deliverable 5.3, was translated in Latvian. Also, the results of the stakeholder survey regarding the barriers for REC development in Latvia (performed within the COME RES Task 3.4 "Dedicated stakeholder consultations") had been preliminary analysed by Latvian partners LEIF and IPE.

Important pre-condition for the transfer visit's success was the composition of the Latvian team representing the different levels of public administration (national authorities, planning region, and local municipality) and involving local initiatives as well.

Finally, an additional online meeting was held on 20th June 2022 between ENEA, LEIF, and IPE to finalise the details of the transfer visit.

The training module was hosted in Magliano Alpi by the Municipality in Town Hall. An Italian-Latvian translator was available. The Mayor of Magliano Alpi, Marco Bailo, an architect, welcomed the participants and explained the political motivations that have led to the realization of the REC which has been among the first experiments of this kind in Italy. His presentation was followed by an introduction to the COME RES project by Gilda Massa, from ENEA, and of Task 6.2 by Paola Amato, an expert of ECOAZIONI. The 1.5 day programme was briefly explained with a clarification on the main goals of the training activity.

The plenary session encompassed presentations by the mentoring experts of the consortium (ENEA, IFEC, RSE) and on the Energy City Hall REC1 and its replicability use cases (REC Magliano Alpi, REC Colle Salvetti, REC CCF, REC Matera). The presentations were a starting point for the highly interactive discussion and knowledge exchange between the mentoring experts and the representatives of the learning region.



Figura 35: Plenary session – presentation phase on Transfer team and Experts

Source: @Luca Barbero

After the introduction, Gabriella De Maio, Professor of Energy Law and Coordinator of Italian Forum of Energy Communities, explained the regulatory and enabling frameworks for RECs cooperative principles. She explained the transposition process of RED II in Italy based on a first **experimental phase** started in March 2020 and ended in June 2021. This phase was necessary to understand the needs of the Italian context for REC development and how to fix or modify specific constraints for REC implementation (see maximum power for RES generation plants and geographical boundaries).

The key points from law 8/2020 highlighted in the presentation were:

- Collective self-consumption and RECs **are treated in the same way from the incentive and regulation perspective**
- The schemes are created to **self-consume** and **share** energy from RES
- The **sharing** of produced electricity is achieved by **using the existing distribution network**
- Sharing can also take place using **storage systems**.

After the experimental phase, with the legislative decree 199/2021 the maximum power for RES Generation Plants belonging to RECs or CECs passes from 200kW up to 1MW and the perimeter changes from secondary to primary substation. This evolution is expected to lead to new scenarios also from the point of view of the legal interpretation in relation to the various cases that can arise **in the setting up, management, and governance of RECs**.

Gabriella De Maio pointed four legal-administrative phases for the creation of a REC:

1. Identification of members.
2. Identification of the legal form.
3. Contract and statute.
4. GSE application for REC registration and further connection to the distribution system.

The new decree provides an expansion in the scope of action for RECs, including: production of **other forms of energy (besides electricity) from renewable sources** for own use by its members; promotion of **integrated home automation and energy efficiency interventions**; provision of **electric vehicle charging services** to its members and taking on the role of a retail company; and **offering ancillary and flexibility services**.

The good practice of the Energy City Hall REC1 was presented by Sergio Olivero, Head of Business & Finance Innovation of Politecnico di Torino, and by Luca Barbero, GO-CER coordinator.

RECs can represent the technical-organizational catalyst of sustainable local development models based on the Energy Transition.

Two new REC are under construction in Magliano Alpi for an installed power of 108 kW and, due to the latest changes in the regulatory system (law 199/2021), the three RECs will be merged into a single larger REC.

The City of Magliano Alpi is signing agreements with other cities interested in transferring its model, which is based on five strategic elements: Planning, Governance, Construction, Management, and Replication. Additionally, the key elements for an adequate management were identified as being the IoT digital platform for data analysis and management and the GO-CER model for planning and construction.

GO-CER is a **container** of professional skills necessary for the realization of REC. It acts on three main levels:

- Towards citizens to increase the awareness regarding the advantages of Energy Communities and to **propose** them local companies and professionals capable of realizing them
- Towards organizations (like public administration) to **support** and **follow** the project in its entirety, from the feasibility study to the construction of the plants and to the involvement of the population.
- Towards Energy Community Managers to support at different levels related to the needs of the local REC.

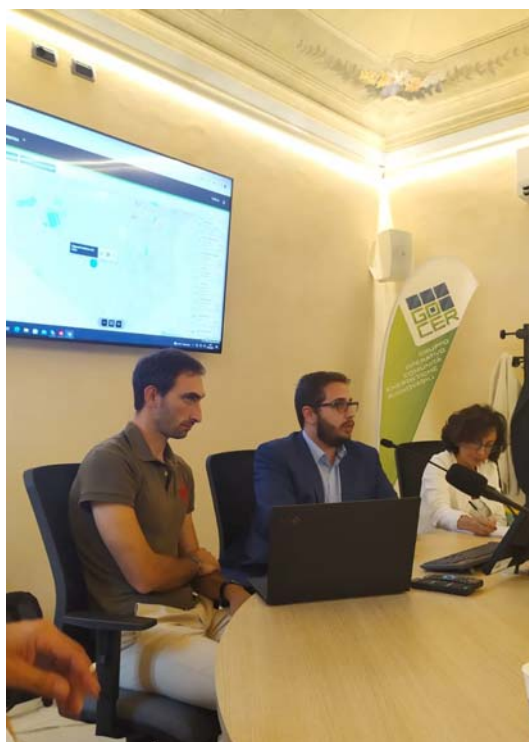


Figure 36: Plenary session – Presentation on transfer activity in CCF on Magliano model

Source: @Ecoazioni

The training module was set up as an interactive workshop and was facilitated by Gilda Massa and Sergio Olivero.

First, the participants were asked to validate the input provided prior to the transfer visit and training on the main transfer elements. One specific need was added, namely “to unite interests of different stakeholders”.

After the validation, the participants were asked to discuss, for each of the transfer elements/measures identified and validated, the following topics:

- What are potential barriers for your region for each of the elements/measures identified?
- Taking inspiration from Magliano Alpi and its replication in place, what could be possible solutions for overcoming these barriers and which of these solutions are viable in terms of transferability to your region?

- What actions and/or legal, governance and policy changes are required to successfully accommodate the transfer of the viable solutions in your region after the lifetime of COME RES?

For each of the transfer elements/measures, input was analysed and summarized in a discussion schema on the whiteboard.



Figure 37: Interactive workshop

Source: @Luca Barbero

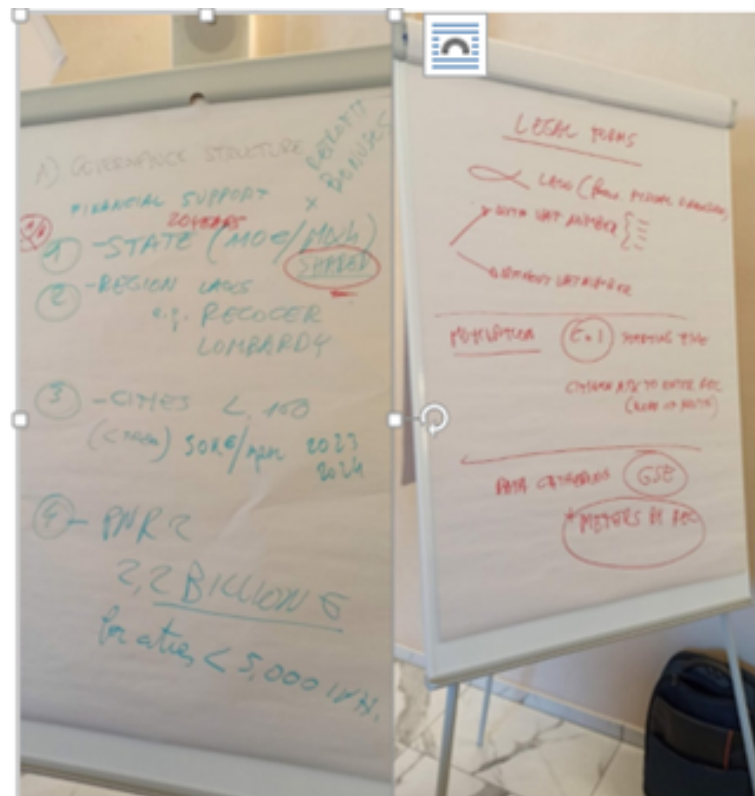


Figure 38: Interactive workshop with schema on whiteboard

Source: @Gilda Massa

4.3.6 Transferability potential of the best practice concepts from the region of origin to the learning region

What emerged from the Italian experience was the importance of an experimental phase in which the limits and needs of the specific context, behind for example the electricity grid, were understood, and the relationship between energy demand and supply by RECs was tested.

In Italy, several funding instruments are in place, implemented through different legal instruments:

- a fixed 110€/MWh bonus on shared energy recognised for 20 years
- a cost for energy fed into the grid (repayment of variable part of grid tariff) of 9€/MWh
- a 50k€ funding for municipalities for energy performance upgrading of buildings (law 160/2021)
- a fund of 2.2 billion€ from the NPRR reserved for cities under 5000 inhabitants for the creation of RECs.

The transfer possibility to Latvia of these funding instruments is as follows:

- In Latvia, starting with 2010, financial aid programmes to increase energy efficiency in buildings (both residential and public ones) are under implementation and will be continued – as these programmes already comprise the installation of RES-based technologies, the option for the collective consumption of RES-based energy should be advocated/promoted when developing/recasting these financial aid programmes.
- The Latvia's transposition of the EU Cohesion Policy Programme's for 2021-2027 period includes a specific measure to promote solar PV systems. Beneficiaries of this program are the commercial sector, municipal capital companies, cooperatives, **energy communities** (including in rural areas) and households. Thus, this new programme might provide investment co-financing for RECs projects. As the details of the programme are not yet elaborated, the enabling conditions for RECs should be promoted/advocated.
- In its turn, the introduction of the preferable bonus tariff for shared electricity in the near future will be hardly possible due to different reasons.
- The Amendment on the Latvia's Electricity Market Law provides the principal option - "the power distribution system services' tariffs might be differentiated between the levels of voltage, power capacity, electricity consumption, electricity delivered to the distribution grid or the profiles of electricity customers". Thus, it provides an opportunity to elaborate differentiated tariffs for electricity sharing, depending on used voltage and other parameters, where the interests of RECs should be promoted/advocated.

Regarding the governance structure, the role of the municipality is strategic in increasing citizens' trust in RECs and this is also due to several factors. First, Italian municipalities benefit from several tax rebates, that facilitate the purchase of photovoltaic panels. Second, municipalities own extensive public areas that may be suitable for installations. Third, the role of Italian municipalities in residents' motivation remains an important and transferable element.

Providing good management of REC is a crucial factor. In this sense, the experience of GO-CER approach in providing this management is highly valuable and possibility for its adaptation shall be further explored.

Table 30: Matrix chart to be used to steer the Peer learning activity

LEARNING REGION: (COUNTRY)					
LIST OF PARTICIPANTS (names and organization)					
NAME OF FACILITATOR (Organization): Gilda Massa					
NAME OF RAPORTEURS: (Organization) Luca Barbero					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lessons learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1 transposition of RED II, particularly definitions and rights of RECs collective self-consumption	Lack of a regulatory framework for energy communities and a roadmap for developing renewable energy community projects	Legislation on RECs is national and Region can legislate within the framework of the State principles (the Italian case). A clear definition of REC in the legislation is necessary. Funding schemes are useful to speed up a top-down approach.	There is no mandatory legal form, but it is necessary to verify which legal form is compatible with the provisions of REDII. Important issue to be considered refers to whether the REC should be registered as VAT payer (opening the possibility for providing services). Electricity sharing regulation, profitable for REC members, is a crucial factor. A precise definition for RECs legal forms needs to be established by the State, indicating the technical and

					<p>legal requirements for each REC type.</p> <p>The internal regulation of RECs, involvement of stakeholders and the usage of REC incomes need to be defined by this regulation as well.</p>
		a2) enabling framework for RECs	Lack of supporting instruments, both consultative and economic, at the stage when energy communities are established	<p>Active role of municipalities and central government is necessary.</p> <p>Funding instruments must be in place.</p> <p>The governance of REC must be in compliance with RED II</p>	<p>The creation of a collective awareness based on the benefits deriving from the adoption of this model of energy production would allow to extend the number of stakeholders involved, both public and private.</p>
					<p>State financial support programmes for REC development and/or management are needed to motivate citizens to cooperate and create RECs.</p> <p>There is a need for support programmes to promote RECs, based on a step-by-step approach – development of initial concept, communication</p>

				<p>and involvement of potential participants; preparation of legal statutes and contracts; and investment co-financing.</p> <p>The financial instruments, applied by Italy's best practice, are hardly directly transferrable, at least under the current framework. However, the demonstration of principal directions of support, applied in the Italian case, are highly useful. Latvia should elaborate its own approach. Funding schemes for pilot projects of RECs, preferably to test different legal forms of RECs as well as operational models, are highly necessary in Latvia.</p> <p>The mandate to educate and inform citizens about RECs creation and management must be given either to municipalities or to other state or municipal institution to</p>
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					<p>support citizens in RECs development.</p> <p>The financial support (if provided for shared electricity as a feed-in-tariff premium type) should be defined for a specific time period.</p> <p>Legislation that allows municipalities to be members and/or founders of RECs in their own territories has to be created.</p>
	<p>b) legal forms c) business models</p>	<p>b/C1) new business models for energy cooperatives and other community energy initiatives</p>	<p>Lack of energy community prototypes that can be modified</p> <ul style="list-style-type: none"> • Lack of citizen-driven energy initiatives • Insufficient knowledge about technological possibilities to create energy communities • Lack of trust in the positive economic impact that energy communities may have on households 	<p>A well-structured model to replicate is necessary.</p> <p>The implementation model is based on the following steps:</p> <ul style="list-style-type: none"> - Energy Consumption - Energy Production local analysis and matching; - Considering local constraints; - Design RES installation, considering storage and EV charging points; - Involvement of public and private stakeholders; 	<p>Define clear steps for implementation and set local ecosystem in a way citizens know “who to contact”. Every community energy model from top-down to bottom-up could work but local context and needs have to be well analysed.</p> <p>Create one-stop-shop to provide technical and financial support for RECs creation. The availability to provide technical</p>

	d) cooperation models and financial participation possibilities for local authorities in RECs.	N.A.		<ul style="list-style-type: none"> - Choice of governance (legal entity, structure, rules to share benefits); Identification of local supply chain of technicians (GO-CER main role); - Installation of RES plants and IoT Platforms; Business model needs to be clear. 	<p>support must be ensured in the long-term.</p> <p>The provision of good management of REC is a crucial factor. In this sense, the experience of GO-CER approach in providing this management is highly valuable and the possibility of its adaptation shall be elaborated. Set a clear methodology for income sharing mechanism.</p>
	Additional elements outside those indicated in the GA	Not applicable	Not applicable	Not applicable	Not applicable

4.4 Poland

Table 31: Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Poland
Learning Region	Warmian
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	Poland
Mentoring Region	energyREGION Michałowo

The Warmian-Masurian Voivodeship is the Polish target region of the COME RES project, selected as a learning region in the framework of the good practice transfer and capacity building task. Warmian-Masurian Voivodeship is located in the North-Eastern part of the country. The seat of the province's local government is Olsztyn. The Warmian-Masurian Voivodeship is the fourth largest region in Poland, covering 7.7% of the territory. Demographically, the region can be classified as the least populated area of the country. The population density is approximately 59 people per km², which is around half of the population density in Poland as a whole. Clean, slightly transformed natural environment, abundance of forests, large distance from industrial, tourist and agricultural areas, nature and insufficient technical infrastructure are the main features of the region.



Figure 39: Map of the Warmian-Masurian Voivodeship region

Source: mapa.targeo.pl

The Masurian Voivodeship is located in the North-Eastern part of the country. The seat of the province's local government is Olsztyn. The Warmian-Masurian Voivodeship is the fourth largest region in Poland, covering 7.7% of the territory. Demographically, the region can be classified as the least populated.

Almost until the end of the second decade of the 20th century, the dominant energy system operating in Poland was a centrally state controlled power system. According to the system's premise, the state controlled the production, transmission and distribution of electricity. Paternalism developed, limiting the rights, freedoms, as well as the responsibilities of citizens in the field of energy. The government, standing in the role of "father", motivated its actions by the social good, the protection of the individual and its lack of authority to legislate for itself. This approach removed the citizens' responsibility for making any decisions in the energy field. The presence of the above energy regime induced passivity among citizens in engaging with the sector. For the people, the energy sector became an abstract branch of the economy, the costs and financing of which were unclear. The public's passivity and apathy became a way for those in power to pursue their political goals. The public interest thus became a secondary objective. Analysing the involvement of citizens in the country's energy affairs, one sees the problem of their lack of awareness and even ignorance.

In Poland, there is no transposition of the definition of RECs, and the few existing energy community initiatives are energy clusters, the latter seen by participants from Warmian-Masurian as the suitable and likely approach to the energy community. In Voivodeship, three pilot community energy initiatives have emerged, often promoted by local authorities or public energy agencies at regional level.

The selection of participants from the learning region was carried out via the Polish stakeholder desk established by COME RES.

The transfer workshop took place in Michałowo, a municipality located in the COME RES model region of energyREGION Michałowo (Poland), within the Province of Podlaskie.



Figure 40: Municipalities involved in the energy cluster energyREGION Michałowo

Source: https://pl.wikipedia.org/wiki/Powiat_bia%C5%82ostocki#/media/Plik:POL_powiat_bia%C5%82ostocki_-_gminy.png

The energyREGION Michałowo (Podlaskie Voivodeship), initiated in 2015 and launched on June 12th, 2017, is a local energy dynamically developing market with balanced energy demand and production, which establishes cooperation of local energy producers with consumer organizations. In the cluster, an electricity and heat producer (an agricultural biogas plant with a capacity of 0.60 MWe) and an electricity producer in a photovoltaic power plant with a capacity of 0.66 MWe, benefit from additional revenues from the sale of heat and cover half of the municipality's heating costs with the swimming pool and the school complex. The stakeholders, who were key in supporting/implementing the project, were private companies and municipalities. More information: [COME RES Deliverable 5.3](#)

4.4.1 Good/best practice transfer measures selected

Table 32: Description of the Belgian Best Practice indicated by the learning region as the basis for capacity development and training workshops within Task 6.2.

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Poland	Energy Region Michałowo	<p>The energyREGION Michałowo is a dynamically developing local energy market. It balances energy demand and production, and thereby establishes cooperation between local energy producers and consumer entities.</p> <p>The energy cluster elaborated its own development strategy and pushes on realizing the projects and initiatives in a consistent manner with high engagement of key stakeholders from the local market.</p>	<p>The energy cluster is an example on how to achieve desired economic profitability of a biogas plant while providing a wide spectrum of benefits to the society and local entities. A key driver for the Michałowo cluster was the need to improve the economic efficiency of an agricultural biogas plant. Through an agreement with local authorities, the producer of biogas receives additional revenues from the sale of heat, and the municipality reduces to half the cost of heating the swimming pool and the school complex.</p> <p>The case demonstrates efficient production of electricity and heat from agricultural resources and extensive supply of heat and electricity – directed towards many recipients (almost all public buildings, enterprises, households in the vicinity). Thanks to the enlargement, the network is prepared for the connection of other entities.</p> <p>The energyREGION Michałowo encourages new investors actively, creating an industrial zone in Michałowo, equipped with energy carriers from RES increasing the attractiveness for future investments.</p>

Table 33: Details on the good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

Partner country	Learning region	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
Poland	Warmian-Masurian voivodship	KAPE	energyREGION Michałowo	<p>Referring to a) Lack of complete transposition of REC II directive</p> <p>Referring to b) Cooperatives as adequate legal forms for RECs</p> <p>Referring to c) energyREGION's management structure</p> <p>Referring to d) d1) Transfer of public spaces</p>
<p>Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i>; b) <i>legal forms</i>; c) <i>Business models</i>; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i>.</p>				

Table 34: Overview of socio-economic benefits of the Belgian best/good practice

Energy community	Participation/ ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
energyREGION Michałowo		✓	✓		✓	✓	

4.4.2 Transfer Team participants in the activities

Table 35: Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region	Mentoring experts from consortium and country of origin
Warmian-Masurian voivodship (Poland)	energyREGION Michałowo (Poland)	Anna Dyląg (KAPE)	Marek Żyliński (Mayor Zalewo Municipality)	Marek Nazarko (Mayor of Michałowo Municipality)
		Anna Piórkowska (KAPE)	Tomasz Koprowiak (Energy manager of Zalewo Municipality)	Jacek Gryko (CEO of Zielona Energia sp. z o.o.)
			Andrzej Koniecko (Head of Mazurian Energy Agency)	Daniel Raczkiwicz (cluster's coordinator)
			Ewa Doskocz (WFOŚiGW in Olsztyn)	

4.4.3 Agenda (day one or/and day one and half)

Time (local)	Activity	Details
Day 1 – 21 June		
(Depending on arrival times)	Transfer to HOTEL	Żubr nad Zalewem Nowa Łuka, Stary Dwór 9/5, 17-220 Narewka
18:00-20:00	Networking SUPPER	Networking dinner with all participants of the transfer exercise.
Day 2 – 22 June		
CAPACITY/KNOWLEDGE TRANSFER WORKSHOP		
9:00-10:00	Registration of participants (welcome coffee)	Conference room in Townhall Białostocka 11, 16-050 Michałowo
10:00-13:00	INTERACTIVE WORKSHOP on knowledge/ transfer and capacity building experiences (Part I - Plenary) WELCOME (<i>Michałowo</i>) Presentation of the H2020 COME RES project and the overall agenda (<i>KAPE</i>)	Facilitators/rapporteurs: <ul style="list-style-type: none"> Anna Dyląg (<i>KAPE</i>) Anna Piórkowska (<i>KAPE</i>) Mentors: <ul style="list-style-type: none"> Daniel Raczekiewicz (<i>KDRE</i>) Marek Nazarko (<i>Michałowo</i>)
	Presentation on the regulatory and facilitating framework for the development of CERs in Poland (<i>KAPE</i>)	Participants from the Learning Region: <ul style="list-style-type: none"> Marek Żyliński (<i>Zalewo</i>) Tomasz Koprowiak (<i>Zalewo</i>) Ewa Doskocz (<i>WFOŚiGW</i>)
	Presentation and instructions on the transfer exercise (<i>KAPE</i>)	
	Presentation of the energyREGION Michałowo (<i>KDRE</i>)	
13:00-14:30	Lunch break	
14:30-17:00	INTERACTIVE WORKSHOP on knowledge/ experiences transfer and capacity building (Part II – Peer Learning) <ul style="list-style-type: none"> Needs analysis of the learning region: <ul style="list-style-type: none"> governance structures and rules, enabling framework for RECs and support scheme designs business models for energy cooperatives between municipalities and companies 	Facilitators/rapporteurs: <ul style="list-style-type: none"> Anna Dyląg (<i>KAPE</i>) Anna Piórkowska (<i>KAPE</i>) Mentors: <ul style="list-style-type: none"> Daniel Raczekiewicz (<i>KDRE</i>) Marek Nazarko (<i>Michałowo</i>)
	<ul style="list-style-type: none"> Collective selection of aspects from the case study to be transferred 	

- Definition of preliminary recommendations

- Jacek Gryko
(Zielona Energia
Sp.z.o.o)

- Conclusions and next steps

Participants from the Learning Region:

- Marek Żyliński
(Zalewo)
- Tomasz Koprowiak
(Zalewo)
- Ewa Dorskocz
(WFOŚiGW)

19:00-20:30

Supper

Day 3 – 23 June

VISIT TO THE EnergyRegion Michałowo Energy Cluster

10:00-14:00

GUIDED TOUR to the facilities of the Energy Cluster – energyREGION Michałowo

- Agricultural biogas
- Photovoltaic power plant
- School complex

Guide:

- Daniel Raczkiewicz
(KDRE)
- Marek Nazarko
(Michałowo)
- Jacek Gryko
(Zielona Energia
Sp.z.o.o)

14:00

Transfer to HOTEL

Private bus

RETURN OF PARTICIPANTS

4.4.4 Training visit



Figure 41: energyREGION Michałowo energy cluster's map

Source: <https://michalowo.eu/zielone-michalowo-jak-gmina-moze-osiagnac-neutralnosc-klimatyczna-do-roku-2025-konferencja/>



Figure 42: Teams from the learning and mentoring region meeting at the Biogas plant.

Source: @ Anna Dyląg.

Table 36: General structure and maximum characters for the informative Fiche presenting the good/best practice that will be part of the transfer activity

energyREGION Polska biogas	
Location	Michałow
Owner	Zielona Energia Sp. z o.o.
Installation date	2015
Plant's power	1,2 MWe (biogas)
Plant annual production	4 800 MWh of electricity and 17,000 GJ of heat from biogas
CO₂ saving	3 650 000 kg
1. DESCRIPTION	<p>An agricultural biogas plant working on agricultural substrates. The biogas plant uses approx. 10 thousand. tonnes of substrates, of which 60% is corn silage, 10% grass, 20% cattle manure, the remaining 10% are waste from the food industry, such as fruit pomace, fruit, vegetables, and whey from the dairy industry. As a result of the technological process, the biogas plant obtains approx. 7.5 thousand m³ of digestate, used as fertilizer for the cultivation of maize. The maize comes from local crops, no more than 15 km away.</p> <p>The biogas plant consists of 2 fermentation tanks and a digestate tank, plus a silage for maize silage, with a total area of 3500 m². The biogas plant produces 2.4 million m³ of biogas annually, with an average content of 51% methane. There is a biogas treatment plant with the use of activated carbon at the site of the biogas plant. At the inlet, the gas is cooled to a temperature of approx. 2°C, then it is directed to the filtering bed with a volume of 4m³ of coal.</p>
2. PLANT'S CHARACTERISTICS	<ul style="list-style-type: none"> • Biogas plant • Year: 2015 • Investment by Zielona Energia sp. z o.o. <p>Purified biogas is used to produce electricity and heat in the process of high-efficiency cogeneration. The electric power of the biogas plant is 0.6 MW (e), the thermal power is 1 MW (t). Annual energy production amounts to 4800 MWh of electricity and 17000 GJ of thermal energy (7000GJ used for the technological process). The generating device is a MWM Petra 750C cogeneration unit..</p> <p>The biogas plant has its own MV switching station. The biogas plant was put into operation in September 2015, the general contractor and technology supplier: Agricomp.</p>

3. RESULTS OBTAINED	The biogas plant generates heat to supply several public buildings, including the municipal swimming pool. A heat pipeline has been built for this purpose.
4. OTHER OBTAINED CHARACTERISTICS	The success of the earlier work led to the extension of the heat pipeline for the newly built municipal housing development.



Figure 43: Main plants of the biogas.

Source: @ Anna Dyląg



Figure 44: Plant of PV and storage field.

Source: @ Anna Dyląg

Table 37: General structure and maximum characters for the informative Fiche presenting the good/best practice that will be part of the transfer activity

energyREGION Polska (PV)	
Location	Michałowó
Owner	Zielona Energia Sp. z o.o.
Installation date	2015
Plant's power	0,66 MWe
Plant annual production	600MWh of electricity form PV
CO₂ saving	450 000 kg
1. DESCRIPTION	PV farm with a capacity of 0.66 MWp, composed of 37 photovoltaic fields, each with a capacity of 0.018, operating on a separate Benning inverter. The PV farm has its own MV switching station. Installation put into operation in May 2015, contractor: Maybatt.
2. PLANT'S CHARACTERISTICS	<ul style="list-style-type: none"> • PV plant • Year: 2015 • Investment by Zielona Energia sp. z o.o.
3. RESULTS OBTAINED	Due to the PV plant, the operation of the biogas plant independent from the national grid.
4. OTHER OBTAINED CHARACTERISTICS	The electricity produced from the photovoltaic installation is used to supply the own needs of the biogas plant. As a result, the economic efficiency of the energy cluster infrastructure has been increased.

4.4.5 Training Module (description of the activities)

During the plenary session, the KAPE team made a short presentation consisting of three parts. In the first part, the objectives and instructions of the transfer exercise, based on the indications included in this deliverable, were presented. In the second, by ways of contextualisation, the methodology followed by the COME RES project to select the good and best practices to be taken as a reference in the transfer exercise was presented. The third and last part closed with an overview of the transposition of the RED II Directive and the development of the enabling framework.



Figure 45: Plenary session with presentation of the good practice energyREGION on Michałowo

Source: Photo taken by Anna Dyląg

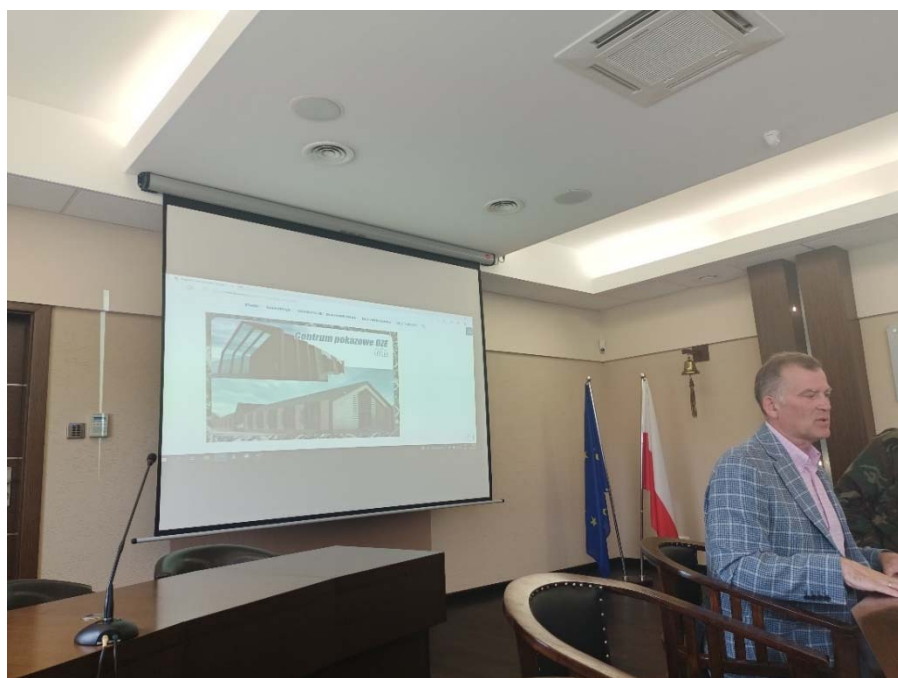


Figure 46: Plenary session with presentation of the good practice energyREGION Michałowo whit municipality

Source: Photo taken by Anna Dyląg



Figure 47: Plenary session with presentation of the good practice energyREGION Michałowo

Source: Photo taken by Anna Dyląg

In the second part of plenary session, Marek Nazarko (Mayor of Michałowo) presented the project in detail and described how cooperation among the Michałowo Municipality and the energy Region Michałowo energy cluster had originated and been implemented. Among the main needs for the establishment of the energy cluster, the heat supply to the local swimming pool and school were mentioned. For this purpose, a biogas plant and heat pipe were built. Fruitful cooperation between the Mayor of Michałowo and the Zielona Energia Sp. z o.o. company (owner of biogas plant), encouraged other communities to join the energy cluster. As a result of the cooperation, it was decided to double the capacity of the biogas plant and build a new heat pipeline.

Daniel Raczkiwicz from KDP, who is the cluster coordinator, continued the session by presenting the concept of the energy cluster, and the stakeholders involved. He emphasized that the most important element for the success of the energyREGION Michałowo is the willingness to cooperate and the ongoing problem solving among the various actors intervening in the process (e.g. the cluster stakeholders - the commune authorities, the owner of the infrastructure, the cluster coordinator and local suppliers). Following the plenary session, the training modules comprised presentations of the good and best practices, by the mentoring experts of the energyREGION Michałowo.

During the training the facilitators made use of guiding questions and addressed the following issues:

What are the specific needs in Warmian-Masurian region in the field of citizens'/community energy?

- a. Governance structures including gaps in the 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

Which elements of the Best Practice case are particularly relevant for Warmian-Masurian region taking into account its specific needs?

Where do you see the most important barriers for a successful transfer of the Best Practice case or elements of it? How could these barriers be overcome?

What actions and/or legal, governance and policy changes are required to successfully transfer/accommodate the Best Practice?

The dynamics adopted for interactive session consisted, first of all, of a round of discussion, questions and answers between the participants of the learning region and the expert mentors, on the proposed transfer measures. Tomasz Koprowiak from the Zalewo Municipal, with other participants, elaborated a draft plan of energy cooperative and energy cluster for Zalewo.

Last part, after dinner break, the transfer workshop was devoted to a study visit to a biogas plant, a photovoltaic power plant and a municipal heating pipeline that supplied heat to municipal buildings. During that visit, was presented infrastructure, success terms and main barriers.

4.4.6 Transferability potential of the best practice concepts from the region of origin to the learning region

With an eye on the transferability to Zalewo, mentoring and learning regions experts discussed the following challenges and barriers:

1. The lack of economic incentives for the development of REC
2. The scepticism of the population about joint investments and on the combination of public and private capital.
3. The scepticism of the population about creating a cooperative and working for communities.
4. The lack of clear regulations and legislative framework (work on the implementation of the REDII is still in progress) and a lack of legal stability and continuous changes that prevent the introduction of long-term strategies (e.g., regarding wind energy).

The identified lessons for further actions are:

1. Need to explore in depth the most suitable administrative procedures for the constitution of RECs in the Zalewo Commune.
2. Analysis and selection of Zalewo project's business and management model.
3. Learning how to create the collection and distribution of biomass substrates from local areas and work in rapidly changing economic and legal conditions.
4. Financing acquisition to start the REC in Zalewo (from different sources).
5. Method of engagement of citizens to energy cooperatives and companies to energy clusters.

Regarding the role of local government in the project, and in particular, the administrative procedures carried out to obtain the transfer of municipal spaces the expert mentors suggested that the engagement of municipalities and public authorities is a key factor for the successful viability of REC initiatives.

Table 38: Matrix chart to be used to steer the Peer learning activity

LEARNING REGION: Poland					
LIST OF PARTICIPANTS (names and organization)					
NAME OF FACILITATOR (Organization): Anna Dylag					
NAME OF RAPORTEURS: (Organization)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lesson learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAP
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	A1) Lack of complete transposition of REC II directive	Barriers related to the transposition in national law of RED II. Decentralization of large-scale energy, replacing it with distributed generation sources and building the civil dimension of energy are developed in Poland through energy clusters and energy cooperatives. The functioning of the energy clusters and energy cooperatives which have a similar approach to RECs, not provide the some opportunities of the REC as in RED II	Poland is preparing for the full transposition of the provisions of RED II into the regulatory framework, to be aligned with existing rules it is a fundamental issue.	Analyse models already developed: energy clusters and energy cooperatives
	b) legal forms	B1) Cooperatives as adequate legal forms for RECs	Functioning problems with the energy cooperative have been the lack of cooperative billing regulations.	Analysis of new regulations and calculations for new RECs.	-
	c) business models	C1) energyREGION's management structure	The most important barrier is to find stakeholders who will interact efficiently with each other.	Analyse best practices for attracting and convincing	Detailed analysis of available resources and creation of a

			This is the basis for establishing a business relationship. Another barrier is financial - the energy cluster is mainly about profit for the stakeholders.	stakeholders to participate in an energy cluster.	system of benefits for potential stakeholders
	d) cooperation models and financial participation possibilities for local authorities in RECs.	D1) Transfer of public spaces	The operation of biogas plants and the odors from them have been a major concern for residents.	<p>The cleanliness of the biogas plant and compliance with the rules of its operation makes it possible to get rid of the odors disturbing residents.</p> <p>Another element is to invite residents to visit the plant which will bring the operation closer and familiarize them with new ventures.</p>	<p>Citizen's participation – Meetings with residents to discuss investments, post-potential problems for residents and jointly identified ways to counter them.</p>
	Additional elements outside those indicated in the GA	Not applicable	Not applicable	Not applicable	Not applicable

4.5 Spain

Table 39: Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Spain
Learning Region	<u>Canary Islands</u>
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	Spain
Mentoring Region	<u>Comunidad Valenciana</u>

The Canary Islands is one of the two Spanish target regions of COME RES project. It has also been selected as a learning region in the framework of the good practice transfer and capacity building task.

The Canary Islands are an archipelago located in the Atlantic Ocean that forms a Spanish autonomous community. It is also one of the outermost regions of the European Union. In terms of area, it comprises eight islands, five islets, eight rocks and the sea.



Figure 48: Canary Island

Source: Google

In the Canary Islands, there is currently an extremely low penetration rate of renewable energy communities and electricity self-consumption¹⁵. The main barriers for REC development in the region (see [COME RES deliverable 2.3](#)) include the lack of information or knowledge on these kind of initiatives, the lack of business models and previous examples to serve as a basis for the REC development, as well as the need for advice on the applicable regulation and the programming of the project phases. In terms of drivers, there is however a strong political momentum to develop this area further in the region.

¹⁵ https://www3.gobiernodecanarias.org/ceic/energia/ocean/files/ESTUDIO_CELs_Dic2021.pdf

Close to 10 community energy pilot initiatives have emerged since 2020, often promoted by local authorities or public energy agencies at regional level.

The selection of participants from the learning region was carried out via various scoping bilateral contacts and the Spanish stakeholder desk, on the basis of two main criteria: a) their present involvement in a REC or community energy initiative (preferably at a very early stage of development); b) their affiliation to a local decision-making institution (i.e. municipality) or energy agency

The transfer workshop took place in Crevillent, a municipality located in the COME RES model region of Comunidad Valenciana (Spain), within the province of Alicante. Crevillent has 29,717 inhabitants (INE 2021), and it forms part of the Alicante-Elche metropolitan area. It is located in the Bajo Vinalopó region, in the Crevillent mountain range, 129 metres above sea level.

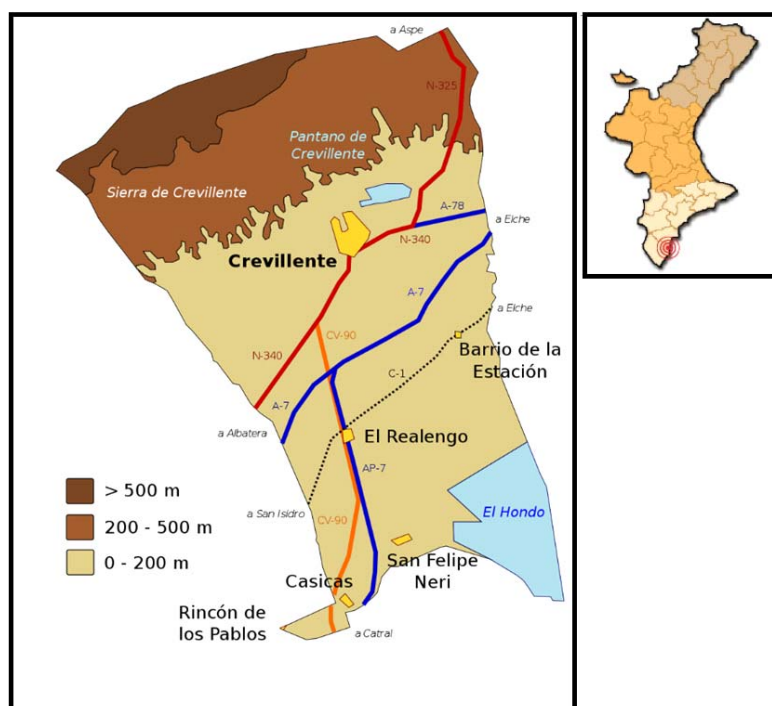


Figure 49: Crevillent municipality, model region of Comunidad Valenciana (Spain)

Source: Google

Solar energy is the greatest resource available in the area. The building model in Crevillent is fundamentally high-rise. This implies little available surface area for the installations, which is necessary to promote collective self-consumption in the urban environment that is why it is necessary to use public spaces or municipal roofs with greater availability for this type of installations.

Importantly, Crevillent is home to the local energy cooperative “Cooperativa Eléctrica Benéfica San Francisco de Asís” - parent company of the Enercoop Group -, created in 1925 with the aim of efficiently distributing electricity in a context of emerging industrial development (particularly of the textile industry). This unique historical experience has been identified as a key success factor of the renewable energy community project “COMPTTEM” (see [COME RES Del 5.3](#)), which stands for “Community for the Municipal Energy Transition”, which was taken as a basis for the transfer exercise.

4.5.1 Good/best practice transfer measures selected

Table 40: Description of Best Practice/s indicated by the learning region as the basis for capacity development and training workshops within Task 6.2

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
Spain	COMPTTEM	<p>COMPTTEM is a REC created as a pilot project in November 2019 by Grupo Enercoop, in collaboration with the local government of Crevillent, with the aim to collaborate towards the green transition by achieving a 100% renewable electricity mix of Crevillent by 2050, providing rebates in the electricity bills of users, and democratising the access and management of regular citizens to energy.</p> <p>The COMPTTEM model brings its members together through a cooperative, which acts as a retailer. All participating prosumers have a supply contract with this retailer. The self-consumption installations are owned by the prosumers, but it is the cooperative who makes the initial investment.</p> <p>The advantages of the model include savings on electricity bills and the enhancement of idle spaces. At the methodological level, the aim is to replicate the cellular mobile telephony model to a network of shared self-consumption installations, acting by "cells" with a radius of 500m. It is perceived that the 500m limitation established in the Royal Decree 244/2019 is insufficient to reach periurban areas through plants of between 5 and 10 MW.</p>	<p>The financial model of COMPTTEM project, by which the installation is financed through a loan to be repaid by members through rebates in energy bills, was identified as a key measure for its adaptation and transfer in the Canary Islands. This innovative model mitigates entry barriers related to financial constraints, as the cooperative assumes the entire investment without its members having to make an initial contribution.</p> <p>Another key measure identified to be explored for its transfer was the legal and administrative procedure followed by COMPTTEM for the involvement of the local government as a member with full participation in the REC. It was considered particularly of interest the methodology followed for the transfer of public municipal land to be used for the installation.</p> <p>The fact that COMPTTEM has strongly benefitted from a historical local tradition of cooperative energy activities, which is not the case in any of the Canary Islands' municipalities involved, was also considered as a challenge in the transfer exercise.</p>

Table 41: Details on the Good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

Partner country	Learning regions	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
Spain	Canary Islands	ECORYS, ACER	COMPTTEM	<p>Referring to a): Incomplete transposition of RED II Directive; Limitations of currently applicable Royal Decree 244/2019.</p> <p>Referring to b): Administrative procedure for the articulation of the project in general (steps); Justification of the legal form chosen (cooperative) and other models adapted to the reality of the Canary Islands (PPAs, associations, etc.).</p> <p>Referring to c): Model of management of energy surpluses by the REC; Use of specific software for the management of the REC and consumption monitoring; Measures to ensure the sustainability of the project over time, from an economic point of view; Compensation or economic exchanges between the parties; Human resources of the REC</p> <p>Referring to d): Role of the Municipality and the cooperative in raising awareness of the need to set up Renewable Energy Communities: dissemination actions, environmental education/other; Procedure followed by Crevillent Town Council and ENERCOOP for the transfer and use of public land roofs by the cooperative</p> <p>Other: Plan for the long-term maintenance of the installations (incorporation of innovative solutions such as shared batteries). Energy efficiency considerations</p>

				Energy poverty alleviation strategies Commercialisation of energy with people outside the cooperative
Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i> ; b) <i>legal forms</i> ; c) <i>Business models</i> ; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i> .				

Table 42: Overview of socio-economic benefits of the Italian/Dutch/Polish/Spanish/Belgian best/good practice

Energy community	Participation/ ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
	✓	✓	✓	✓	✓	✓	✓

4.5.2 Transfer Team participants in the activities

Table 43: Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region (Mentoring experts from consortium and country of origin
Spain	COMPTTEM	Nicoletta del Bufalo (Managing Director, ECORYS ES)	Alexis Lozano (Gran Canaria Island Energy Council): The Gran Canaria Island Energy Council is leading the Arinaga industrial energy community project, based in the municipality of Agüimes. This project aims to create a REC/ „aggregator“ of industrial consumers, promoting renewable energy production and storage and creating a local electricity market with	Joaquín Mas (Director General, ENERCOOP)

			blockchain technology and artificial intelligence.	
		Irene Alonso (Consultant, ECORYS ES)	Fidel Vázquez (City Council of El Rosario - Department of Ecological Transition): The City Council leads the renewable energy community project „El Rosario Solar“. This REC project, at an early stage of development, aims to bring together small and medium enterprises (SMEs) located within the municipality of El Rosario, as well as residents within 500m of the power plant (10MWp).	Isabel Mas (Engineer in charge of renewable installations, ENERCOOP)
		Pouyan Maleki (Consultant, ECORYS ES)	Pedro Apeles Díaz Ortiz (Coordinator of the Office of Renewable Energies and support for the Covenant of Mayors of the Cabildo of Tenerife): This office provides advice to citizens, companies and local administrations on the island of Tenerife on renewable energies, energy efficiency and sustainable mobility. Within its tasks, the office is currently advising the municipalities of Tacoronte, La Laguna and El Rosario, in the creation and	

			implementation of their respective local energy communities at municipal level.	
		Francisco Rueda (Junior Associate, ECORYS ES)	María del Carmen Díaz Vilela (Councillor for the Environment and Sustainability, Tacoronte Town Council): The Tacoronte council is promoting Tacoronte's community energy, which is constituted as a non-profit association with 22 members. At the moment, the REC is developing its rules of procedure for the operation of renewable energy installations.	
		Xenia Giménez (ACER)		
		Roland Schumann (ACER)		

4.5.3 Agenda

Time (local)	Activity	Details
CAPACITY/KNOWLEDGE TRANSFER WORKSHOP		
15:00-15:30	Transfer to ENERCOOP CREVILLENTE Headquarters	Private bus to Carrer Cor de Jesus Corazon de Jesus, 17, Crevillent, Alicante
15:30-16:30	INTERACTIVE WORKSHOP on knowledge/ experiences transfer and capacity building (Part I - Plenary) <ul style="list-style-type: none"> Presentation and instructions on the transfer exercise (Nicoletta del Bufalo, ECORYS) Presentation on the regulatory and facilitating framework for the development of CERs in Spain with a regional comparative approach between the Canary Islands and the Valencian Community (ECORYS/ACER) Presentation of the COMPTTEM project (Energy Community of Crevillent) 	Facilitators/rapporteurs: <ul style="list-style-type: none"> Nicoletta del Bufalo, Irene Alonso, Pouyan Maleki, Francisco Rueda (ECORYS) Mentors: <ul style="list-style-type: none"> Isabel Mas (ENERCOOP) Efren Guillo (ENERCOOP) Participants from the Learning Region: <ul style="list-style-type: none"> Pedro Apeles (OER-Tenerife) Alexis Lozano (CIE-Gran Canaria) Carmela Díaz (Tacoronte residencial REC) Fidel Vázquez (El Rosario Solar REC)
16:30-16:45	Coffee break	
16:45-18:30	INTERACTIVE WORKSHOP on knowledge/ experiences transfer and capacity building (Part II – Peer Learning) <ul style="list-style-type: none"> Needs analysis of the learning region: <ul style="list-style-type: none"> <i>governance structures, including gaps in national transposition of EU directive</i> <i>legal forms</i> <i>energy market activities and business models</i> <i>cooperation models and possibilities for financial participation of local authorities in RECs</i> Collective selection of aspects from the case study to be transferred Definition of preliminary recommendations Conclusions and next steps 	Facilitators/rapporteurs: <ul style="list-style-type: none"> Nicoletta del Bufalo, Irene Alonso, Pouyan Maleki, Francisco Rueda (ECORYS) Mentors: <ul style="list-style-type: none"> Isabel Mas (ENERCOOP) Efren Guillo (ENERCOOP) Participants from the Learning Region: <ul style="list-style-type: none"> Pedro Apeles (OER-Tenerife) Alexis Lozano (CIE-Gran Canaria) Carmela Díaz (Tacoronte residencial REC)
VISIT TO THE PV FACILITIES OF THE COMPTTEM PROJECT		

GUIDED TOUR to the facilities of the Energy Community of Crevillent (COMPTTEM)

18:30-20:00

- **Parc Nou de El Realengo:** urban project (park) which contains the photovoltaic modules and contains all the installation technology (inverter, batteries, telecommunications, etc...), as well as the charging point for electric vehicles.

Guide:

- Raúl Armero (ENERCOOP)

20:00

Transfer to HOTEL

Private bus

4.5.4 Training visit



Figure 50: Bird-view of the El Realengo Park installation

Source: @EM, 2021

On a municipal plot where sports and recreational facilities are located, COMPTTEM have installed a 600 square metre roof of solar panels with the capacity to generate 180,000 kWh per year, which will cover 50% of the district's energy needs. (Source: EM, 2021)



Figure 51: Participants in the transfer workshop during the plenary session, listening to Joaquin Mas' in-depth presentation on the COMPTTEM project. Source: @Own, 2022



Figure 52: Participants in the transfer workshop and visit at the El Realengo Park installation. Source: @Own, 2022



Figure 53: El Realengo Park's energy storage facilities and electricity meters, including a banner of H2020 project "MERLON", who partially financed the pilot site. Source: @Own, 2022



Figure 54: Exterior view of the El Realengo Park facility, with solar panels on the roof-top. Source: @Own, 2022

Table 44: General structure and maximum characters for the informative Fiche presenting the good/best practice that will be part of the transfer activity

COMPTEN Project (Spain, Valencia Region, Municipality of Crevillent)	
Location	Crevillent, Alicante (Spain)
Owner	ENERCOOP
Installation date	2019
Plant's power	120 kWp
Plant annual production	180,000 kWh per year
CO2 saving	45 t CO2 per year
1. DESCRIPTION	The technology that the REC COMPTEN uses is PV solar energy generation facilities with Li-ion energy storage and 4 e-mobility charging facilities located in public and private building roofs as well as in previously un-used public plots of land.
2. PLANT'S CHARACTERISTICS	The current PV installation comprises 300 solar panels in a 600m ² areas 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, which is achieved by means of a medium capacity storage facility of lithium-ion with a 240kWh capacity. Moreover, four e-mobility charging facilities have been installed for local electric vehicles, with two fast charging stations (2x50kW + 1x43kW in each station) and two semi rapid charging facilities of 22kW (2x22kW in each station).
3. RESULTS OBTAINED	These energy production centres generate more electricity than all the cooperative's members consume. All its inhabitants consume 100% clean electricity at the lowest price on the electricity market.
4. OTHER OBTAINED CHARACTERISTICS	The REC put in place a simplified compensation mechanism, in which excess energy is released into the general grid for a compensatory payment.

4.5.5 Training Module

During the plenary session, the ECORYS and ACER team made a short presentation consisting of three parts: first, the objectives and instructions of the transfer exercise were presented, based on the indications included in this deliverable. Secondly, by way of contextualisation, ECORYS presented the methodology followed by the COME RES project to select the good and best practices to be taken as a reference in the transfer exercise. Finally, the presentation focused on the legislative context in which the Energy Communities in Spain are framed, and particularly on the status of the transposition of the RED II Directive and the development of the enabling framework.

Then, Joaquín Mas (Director General at ENERCOOP) presented in detail the project COMPTTEM. The COMPTTEM model is characterised by putting in place an “umbrella entity” for the whole community: a cooperative. The cooperative is at the same time an energy trading entity, and all prosumers must have contracted their supply with it. Self-consumption installations are owned by the prosumers, but it is the cooperative who makes the investment in the first place. As main advantages of this model, Enercoop and the consumers get space to locate the installations in public buildings; citizens and companies obtain savings on their bills; the city council gives value to an idle space (roofs); renewable production is increased on a local scale and there is an optimisation of operation and maintenance.

The second part of the transfer workshop consisted of an interactive peer learning session focusing on various aspects and measures of the COMPTTEM project (including those related to legislation, business models, cooperation models, as well as the involvement of local governments). These aspects were pre-identified during an online preparatory meeting held with the participants of the learning region in June 14th.

The dynamics of the interactive session consisted of, first of all, a round of discussion, questions and answers between the participants of the learning region and the expert mentors about the proposed transfer measures. The questions were specifically targeted by the facilitator to help identify the main barriers encountered by the participants per topic. This was followed by a joint identification of solutions and recommendations, steered by the facilitator, and with the aim of informing the contents of the second transfer exercise to be held in early October 2022.

4.5.6 Transferability potential of the best practice concepts from the region of origin to the learning region

During the interactive session, participants from the target region highlighted the need to explore in depth the most suitable legal forms and administrative procedures for the constitution of RECs in the Canary Islands. Based on the experience of the COMPTTEM project, the feasibility of the legal form of the cooperative was discussed, which, while adequately in line with the REC concept, also poses certain difficulties in the learning region due to the absence of a cooperatives law at the regional level. Thus, alternatives such as the formation of associations (in the case of the REC of Tacoronte and El Rosario Solar) or public-private partnerships were highlighted as possible solutions. It is recommended that a set of guidelines for local governments are developed (with support from COMPTTEM).

The discussion then focused on the aspects of the COMPTTEM project's business and management model, one of the aspects with the greatest potential for transferability. The main interest of the participants of the learning region was to know the formulas for energy distribution/sharing in the framework of the COMPTTEM project as well as the compensation models in place (finding a balance

between what the REC members contribute and what they receive). The mentoring experts indicated that the distribution is done through the figure of the self-consumption manager (aggregator).

Furthermore, as self-consumption does not compensate surpluses, and given that it is legally required to register as a producer in order to sell the surpluses (through the electricity tax form 583), mentoring experts recommended using the simplified compensation without compensation of surpluses administrative model for RECs. In order to estimate/define energy prices, COMPTTEM carries out a market study and a feasibility analysis. As a result, three different pricing scenarios are considered. Revenues are generated from the management of returns through a single trader: the cooperative, which is at the same time a producer, a distributor and an energy trader.

The mentoring experts also presented their business model called "pay per use (as a service)", which removes the financial barrier to entry. The aim of the REC is not to share profits but to share savings. During the first few years, COMPTTEM makes all revenues go to amortisation of the installation, but from the fourth year onwards, they become savings.

Regarding the role of local government in the project, and in particular, the administrative procedures carried out to obtain the transfer of municipal spaces, the expert mentors indicated that COMPTTEM makes use of the figure of the demanial concession (which allows the use of goods in the local public domain for a maximum period of 75 years), although their use can also be accessed through a call for tenders. However, the need for intensive advocacy work with the administrations to convince them of the relevance of this type of action, which is still unknown, is emphasised. COMPTTEM also carries out citizen advocacy activities to promote the use of renewable energies, as payment in kind to the city council for the cession of its facilities.

Table 45: Matrix chart to be used to steer the Peer learning activity

LEARNING REGION: (Canary Islands)					
LIST OF PARTICIPANTS: Alexis Lozano (Gran Canaria Island Energy Council); Fidel Vázquez (City Council of El Rosario - Department of Ecological Transition); Pedro Apeles Díaz Ortiz (Coordinator of the Office of Renewable Energies and support for the Covenant of Mayors of the Cabildo of Tenerife; María del Carmen Díaz Vilela (Councillor for the Environment and Sustainability, Tacoronte Town Council)					
NAME OF FACILITATOR: Nicoletta del Bufalo (ECORYS)					
NAME OF RAPORTEURS: Irene Alonso (ECORYS), Xenia Giménez (ACER)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit	Potential barriers identified by learning regions in relation to each element/measure	Possible overcoming solutions as the result of the lesson learned from the training activity	RECOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1) Lack of complete transposition of REC II directive	500m limitation in Royal Decree 244/2019.	Replicate the cellular mobile telephony model to a network of shared self-consumption installations, acting by "cells" with a radius of 500m.	Further explore the possibility of transferring the block-chain model under development by ENERCOOP.
	b) legal forms	b1) Cooperatives as adequate legal forms for RECs	Lack of a specific regulation on cooperatives in the Canary Islands.	Associations Public-private agreements.	Developing a "guide" for local governments and citizens on the different legal forms a REC can adopt (including advantages and disadvantages).
	c) business models	c1) COMPTM's management structure	Lack of practical knowledge of the renewable energy self-consumption market conditions. Lack of resources (human, financial) in order to manage the REC.	Using the simplified compensation without compensation of surpluses administrative model for RECs.	Further explore the advantages and disadvantages of the model for Canary Islands' RECs.
		c2) Energy sharing/distribution ("as a service" model)	Unlike ENERCOOP, the promoters of the pilot projects in the Canary	Use of the figure of the self-consumption manager.	No specific recommendations were made in this regard.

			Islands do not own the grid. This is a very peculiar historical characteristic of COMPTTEM deriving from the 100-year-old pre-existing energy cooperative unparalleled in other Spanish regions.		
		c3) Administrative model	No barriers were explicitly indicated.	On the legal basis of the Royal Decree 244/2019, use the shared self-consumption with grid storage with surplus and simplified compensation.	Further explore replicability opportunities for this model.
	d) cooperation models and financial participation possibilities for local authorities in RECs.	d1) Transfer of public spaces	Lack of experience with the implementation of public-private initiatives. Difficulties in legally framing the public space transfers. Need for administrative innovation Time-consuming process.	Demanial concession is the title that grants a natural or legal person the right to the use and enjoyment or private and temporary use of a property or right in the public domain while maintaining its ownership. Lobbying work, explaining the win-win potential outcomes to the local government the REC wants to involve Public energy information system, which served as payment in kind to the Crevillent town council in the framework of the transfer of public spaces.	Capacity building with regards to the different legal/administrative formulas for the use of public spaces for REC development (focus on tendering).

5 Main outcomes from capacity building and transfer workshops

A general remark that both directly and indirectly has emerged, in both cross country (Poland to Poland; Spain to Spain¹⁶) and transnational (Germany to the Netherlands, Italy to Belgium; Latvia to Italy¹⁷) **transfer workshops** is that, there is not a one-fits all model of REC that can be directly from transferred from one region to another. Even if some of the transferable elements/measures of the best/good practice/s chosen for discussion, presented viable similarities for potential implementation, an adaptation to regulatory, social, territorial, and economic conditions Adaptation to regulatory, social, territorial, and economic conditions, that change from region to region, it is always necessary.

This, in primis, being the result of **division of powers and the application of subsidiarity** within each Members states¹⁸, as RECs touch various competences/policies beyond energy such as, among others, competition, social cohesion, environmental issues etc. Such a complexity is also the reason why the success of RECs models and potential transferability across the EU are context-specific. In other words transfer and adaptation must be clearly rooted to local socioeconomic environments and sensitive to local contexts. This is also something which has already clearly emerged by the best practices case analyses carried out by the COME RES project within WP5, which has also constituted the basis the capacity building within Task 6.2 and the transfer experiments to be carried out within Task 6.3 ("Best practice transfer roadmaps").

Therefore, the transposition/adoption of the best practices selected by the 5 learning regions, at transnational levels, needs a clear assessment of the "normative" pre-conditions set forth by individual Member states and of the specific contextualization at local level. In such framework the capacity building and transfer activities carried out by the transfer workshops, must be intended as a starting point for the activities envisaged by Task 6.3.

As the result of the above highlighted aspects, the methodology adopted to assess the outcomes of the transfer workshops has been divided in 2 parts:

1) The first part provides list of the "final recommendations" made by each transfer team in reference to the good/best practice/s potential adaptation to the learning region. This is the result of the peer learning exercise that started from the elements/measures and then analysed each of the barriers and overcoming solutions, subsequently bringing the final statements (i.e. the recommendations). Opening with essential/synthetic information on the transfer visits, all the lists have been presented as quick reference and to facilitate a comparative analysis **constitutes possible preliminary areas of discussion** in the transfer activities to be carried out in Task 6.3.

¹⁶ For quick reference please refer to the countries indicated in point 1 and 3 of "Table 1.3. Time schedule for the implementation of the transfer visits in M22 on the part of learning regions.

¹⁷ For quick reference please refer to the countries indicated in point 2, 4 and 5 of "Table 1.3. Time schedule for the implementation of the transfer visits in M22 on the part of learning regions.

¹⁸ Division of powers between the EU and MS takes into consideration the different dimensions of decentralisation (political, administrative and fiscal) across the 27 EU Member States. It is tightly related to the multilevel governance and subsidiarity mechanisms in each country with reference to the EU legislation and its implementation in MS. For more information consult the specific [Interactive Platform of the Committee of the Region](#).

2) The second part provides a more articulated review of the **outcomes of the capacity building and transfer workshops carried out by ECOAZIONI**. The review aims at capturing recurrent issues and shared consideration emerging from the transfer reports, representing some **cross-cutting issues of general interest for the transfer exercise**. Such considerations have been clustered under **6 synthetic statements**. As such, each statement encompasses more elements/measures of the best/good practice¹⁹ as the issues dealt with and reflected in the peer learning matrix by transfer teams are often interrelated. This second part can be taken as additional inputs for the activities to be carried out within Task 6.3.

5.1 List of final recommendations of the capacity building and transfer workshop activities using the peer learning approach

5.1.1 Learning Region – Thuringia (Germany)

The transfer visit of the DE_NL transfer team, focused on three best/good practices located in the Netherlands: Energy Garden, Citizen Wind Farm de Spinder and Community Virtual Power Plant Loenen. The peer learning seminar analyzed and discussed elements and measures of these three cases with a high level of detail in order to bring out the different aspects to be included in the list of recommendations.

Table 46: Final Recommendations for the transfer roadmap – Thuringia (Germany)

Final Recommendations
Name and country of the good/best practice: Energy Gardens (The Netherlands)
Learning region: Thuringia
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • There are no one-fits-all ownership models. Some Energy Gardens are entirely owned and developed by an energy cooperative, some are owned and developed together with a commercial partner. It depends on the combination of actors and ownership of the land where the garden should be located. • The initial impulse for planning an Energy Garden could come from the municipality in which the potential garden is located or from commercial actors (as in the case of the Energy Garden Mastwijk, as the land belongs to them) in a PPP model. NGOs as initiators would be perceived as trustworthy and their direct involvement could help enhancing social and local acceptability of the project. Another possibility is that ownership will be open to citizens through crowdfunding. • It is advisable to pursue two different kinds of financial backing, one for initiating the process and planning and one for the project with the energy installation.

¹⁹ We refer here to the elements selected by the transfer teams based on recommendations by the Country Desk, and further detailed from the general four characteristics indicated in Grant Agreement: a) governance structures including gaps in the national transposition of the EU directives; b) legal forms; c) Business models; d) cooperation models and financial participation possibilities for local authorities in good/best practices.

- 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, with separate funding.
- As in the case of Gelderland and other energy gardens, the costs for initiating the process might be covered by a foundation. It should be further explored which foundations exactly might be considered. Funding from the Lotto Foundation might be conceivable, but there is strong competition for the use of the funds. There are other foundations that might be approached (e.g. DBU, Alfred-Toepfer-Stiftung etc.)
- For the ‘social’ part of the project (e.g., the participation process, renaturation), environmental NGOs could take the lead and apply for funding that are accessible only to non-profit organizations. Furthermore, it could be very helpful for the project implementation and project monitoring to consider a market-neutral team of experts, who can provide advice and help.
- The possibility to involve commercial actors (for example those owning the land) should not be ruled out a priori. They could be interested in investing in the ‘social’ part of the Energy Garden, as they might want to enhance public acceptance.
- In the Netherlands, solar energy is the dominant technology in the energy gardens. In Thuringia one could also try to embed wind energy in the gardens.
- The participation procedures adopted in the Netherlands can enhance social and local acceptance. All stakeholders should be involved from the very beginning, already in the early planning stage, in the design process, and development. The method of mapping (natural) values of the area together with the relevant stakeholders (who know the area) represents a promising method for the Thuringian case.
- Citizen participation, especially of local residents, in the design, implementation and exploitation of each energy garden project is a prerequisite for its success. It is of vital importance to continue communicating with the local community, even when progress is slow.
- In the initial stage of planning, information material should be (visually) rough enough and stimulate to provide input.

Table 46: Final Recommendations for the transfer roadmap – Thuringia (Germany)

Final Recommendations
Name and country of the good/best practice: Citizen Wind Farm de Spinder (The Netherlands)
Learning region (Germany): Thuringia
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • Municipalities, landowners and residents should be pro-actively informed about the land areas to be designated and the possibilities and benefits of developing wind farms in community (co-)ownership. ThEGA is already now quite active with its label for fair wind energy and its manifold dialogue and communication activities. These activities should be further intensified and supported by the state government. • Municipalities should benefit financially through a cooperation with local energy cooperatives or other community energy initiatives.

- Furthermore, municipalities should be enabled **to proactively designate wind energy zones themselves**. Through the designation of priority zones in municipal land use plans or development plans, municipalities should have the opportunity to install at least a certain number of wind turbines on their own land.
- **Policy makers** in Thuringia should consider introducing a **quantitative political goal** for community energy (e.g., minimum share of local ownership, number of new energy communities to be established by 2030).
- **Policy makers** in Thuringia should assess the possibilities of introducing **regulatory policy measures** requiring a minimum share of local ownership (see also the experience of the federal state of Mecklenburg-West Pomerania). In 2016, the federal state of MWP adopted the Citizen and Community Participation Act which requires wind farm operators to make 20% of company shares available for purchase by residents and communities in the vicinity of the wind farm).
- Alternatively, the **Thuringian Energy and Greentech Agency ThEGA** should check if the existing **Quality Label for Fair Wind Energy** might be extended to include a guideline requiring project developers to provide local co-ownership as one of several optional financial participation offers.
- **Municipalities** should inform **local landowners** and **residents** about the option to set up community wind/solar farms or wind/solar farms in local co-ownership. They should encourage landowners not to conclude too early pre-contracts with developers.
- The state government should consider introducing **more requirements** for developers **to inform municipalities** and **local residents in advance** about their plans to set up wind or solar farms.

Table 47: Final Recommendations for the transfer roadmap – Thuringia (Germany)

Final Recommendations
Name and country of the good/best practice: Community Virtual Power Plant Loenen (The Netherlands)
Learning region (Germany): Thuringia
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • Check the availability of EU, federal and/or state level R&D programmes and regulatory sandboxes to develop a pilot project. • Consider developing a roadmap for virtual community power plants in Thuringia. • Check the possibilities to develop a pilot project involving the local DSO and local energy cooperatives. Examine if Jena could be a suitable site where the local energy cooperative is a shareholder of the local municipal utility company (Stadtwerke Leipzig). Consider combining smart city and regulatory sandbox concepts.

5.1.2 Learning Region – Apulia (Italy)

The transfer visit of the IT_BE transfer team, focused on one best/good practice, namely Ecopower, and specifically on its two major installations: a small-scale hydro power plant producing green electricity, and the wind turbine plant that constitutes Ecopower's first project. The peer learning seminar analyzed and discussed elements and measures of these three cases with a high level of detail in order to bring out the different aspects to be included in the list of recommendations.

Table 48: Final Recommendations for the transfer roadmap – Apulia (Italy)

Final Recommendations
Name and country of the good/best practice: Ecopower (Flanders, Belgium)
Learning region (Country): Apulia region (Italy)
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • Improve/strengthen communication with the DSO to make the authorization process more transparent and less time consuming. To facilitate the authorisation process, access to relevant information and (high quality) data should be improved. • 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. • Create specific expertise on the subject of RECs in the territories where the RECs are to be established. • 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. • Report about the benefits/impacts of a REC and showcase success stories to build trust/support for local RES projects. • Direct participation of citizens in the REC to minimize resistance and maximize added value for local community. • Ensure a 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. • Start thinking about the organizational structure of the REC (e.g. controlling body, procedures, ICT integration).

5.1.3 Learning Region – Latvia (Latvia)

The transfer visit of the LV_IT transfer team focused on one best/good practice, located in Magliano Alpi (Piedmont). The visit aimed at specifically analysing the installed PV panels and electric vehicles (EV) charging stations, as well as the energy data management system based using IoT. The peer learning seminar analyzed and discussed elements and measures of these three cases with a high level of detail in order to bring out the different aspects to be included in the list of recommendations.

Table 49: Final Recommendations for the transfer roadmap – Latvia region (Latvia)

Final Recommendations
Name and country of the good/best practice: Energy City Hall Rec1 (Magliano Alpi, Italy)
Learning region (Country): Latvia region (Latvia)
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • A precise definition of REC legal forms is needed, indicating the technical and legal requirements for each REC type. The internal regulation establishing the relation between REC members, their involvement, and the usage of REC incomes must be defined by this regulation as well. • The creation of a collective awareness based on the benefits deriving from the adoption of this model of energy production would allow to extend the typology and number of stakeholders involved, both public and private. • State financial support program for REC development and/or management is needed to motivate citizens to cooperate and create RECs. Funding schemes for REC pilot projects, preferably to test different legal forms as well as operational models, are highly necessary. • Electricity sharing regulation, profitable for REC members, but also not creating the opposition from consumers not participating in REC (for instance, if the support of fee-in-premium type for shared electricity would be discussed) is a crucial factor and must be better elaborated. • The mandate to educate and inform citizens about RECs creation and management must be given either to municipalities, or other state or municipal institutions to support in RECs development. Simultaneously, the wider public discussion on the role of RECs in the future energy system is necessary to promote social acceptance of the REC concept. • Define clear steps for REC implementation and set the local ecosystem in a way citizens know “who to contact”. Every community energy model, from top-down to bottom-up, could work but local context and needs must be well analysed. • Legislation that allows municipalities to be members and/or founders of RECs in their territories must be established. • Create one-stop-shop agency to provide technical and financial support for RECs creation. The availability to deliver technical support must be ensured in the long term. • Set a clear definition of spending REC income share (if applicable) for local community. The goals of this should be defined in the process of public consultations. • The provision of good management of REC is a crucial factor. In this sense, the experience of GO-CER approach in providing REC management is highly valuable and the possibility of its adaptation shall be elaborated.

5.1.4 Learning Region – Michałowo (Poland)

The transfer visit of the PL_PL transfer team, is one of the 2 cross country exchange. The visit focused on the energyREGION Polska best/good practice running on a biogas plant that uses agricultural substrates and a PV farm that feeds in the necessary energy. The peer learning seminar analyzed and discussed elements and measures of these three cases with a high level of detail in order to bring out the different aspects to be included in the list of recommendations.

Table 50: Final Recommendations for the transfer roadmap – Thuringia (Germany)

Final Recommendations
Name and country of the good/best practice: energyREGION Polska (Poland)
Learning region (Country): Warmian-Mazurian Region
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • The initial impulse for planning an energy cluster could come from the municipality. • The key is to carry out detailed analysis of available resources and creation of a system of benefits for potential stakeholders • Municipalities, landowners, and residents should be informed about the land areas to be designated for RES investments. • Policy makers in Warmian Mazuriam Region should consider introducing a quantitative political goal for community energy (e.g., minimum share of local ownership, number of new energy communities to be established by 2030). • It is advisable to pursue different kinds of financial backing for initiating the process, planning and the project with the energy installation. • There could be advantages in splitting the 'social' (e.g., the participation process) and the 'commercial' part (the renewable energy infrastructure) of the energy cluster project, with separate funding. • For the 'social' part of the project (e.g., the participation process, renaturation), environmental NGOs could take the lead and apply for funding that are accessible only to non-profit organizations. Furthermore, it could be very helpful for the project implementation and project monitoring to consider a market-neutral team of experts, who can provide advice and help. • The dedicated for Warmian Mazurian region participation procedures can enhance social and local acceptance. All stakeholders should be involved from the very beginning, already in the early planning stage in design process and development. • Citizen participation, especially of residents, in the design, realisation and exploitation of an energy cluster or energy cooperative project is a prerequisite for its success. • In the initial stage of planning, information material should be (visually) rough enough and stimulate to provide input.

5.1.5 Learning Region – Las Canarias (Spain)

The Transfer visit of the ES_ES Transfer Team, together with the Polish energyREGION Polska is one of the 2 cross country exchange. The visit focused on the COMTER best/good practice that combines PV solar energy generation facilities with Li-ion energy storage and 4 e-mobility charging facilities located in public and private building roofs as well as in previously un-used public plots of land. The peer learning seminar analyzed and discussed elements and measures of these three cases with a high level of detail in order to bring out the different aspects to be included in the list of recommendations.

Table 51: Final Reccomandations for the transfer roadmap – Canary Islands (Spain)

Final Recommendations
Name and country of the good/best practice: COMPTTEM (Spain)
Learning region (Country): Canary Islands (Spain)
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • Further explore, during the 2nd transfer workshop, the viability of transferring the energy sharing model developed by ENERCOOP, focusing on the figure of the demand aggregator and compensation mechanisms developed so far. • Developing guidelines (or other type of capacity building materials or tools) targeted at local governments and citizens on the different legal forms a REC can adopt, including its advantages and disadvantages, further feeding the work already started by the Cabildo de Tenerife's Renewable Energies Office. • Capacity building module on the existing models of cooperation with municipalities, focusing on the legal/administrative formulas for the use of public spaces for RECs. • Exploring the replicability of the self-consumption with simplified compensation model adopted by COMPTTEM in the Canary Islands' RECs at an early stage of development (Tacoronte, El Rosario Solar).

5.2. Cross-cutting issues of general interest for the transfer exercise

When evaluating the good practice adopted in the model region and the possibilities for transfer, it is always necessary to take into account contextual factors (particularly those which are beyond the host region's control). In other words, a number of aspects cannot, or can only scarcely be, influenced by an individual municipality or region when it comes to implementing energy and climate policies. Some of those contextual factors can be found at the national or (partly) regional level, such as the implementation of EU Directives, national programmes and regulations, regional networks. Others are given by the specific energy context in the country and the urban conditions (i.e. characteristics of the built environment, demographic and socio-economic characteristics of the population).

The cross-cutting issues considered here have emerged from the transfer activities and transfer reports. Indeed, they cut across most or all aspects relevant to the transferability of the best practices. These topics should be integrated and mainstreamed throughout all stages of development, from policy design to implementation, evaluation and learning and therefore forming the basis for best practice transfer roadmaps (Task 6.3).

Mainstreaming cross cutting issues is neither easy nor obvious, as it requires a political leadership and institutional commitment as well as a full/complete transposition of RED II. Based on the transfer exercises and lessons learnt: critical enabling factors are following: supportive policy frameworks and strategies; the commitment of necessary financial and human resources; performance incentives and accountability; and a learning culture. In fact, the process of mainstreaming requires special flexibility and adaptability, including progressive creation of new norms (if needed) and advanced standards as awareness is created as well as a full understanding and sharing of the goals to be achieved

The **"lessons emerging from transfer reports"** in relation to the points raised above bring together different knowledge acquired as well as new findings about the peer learning process carried out in the project partners' territories. These lessons can help the consortium members as well as other COME RES relevant actors to understand and implement measures that are critical to manage and enhance the development of Renewable Energy Communities (REC) in their own territories.

Below, some of the main cross-cutting issues and statements that emerged through the transfer reports have been highlighted.

Table 52: Main cross-cutting issues

<p>(STATEMENT 1)</p> <p>ROLE OF MUNICIPALITIES AS PRIMARY PROMOTERS OR FACILITATORS TO GUARANTEE PUBLIC INTEREST</p>	<ul style="list-style-type: none"> • All transfer teams involved in the transfer visits have highlighted the need for local authorities to act as facilitators and promoters/guarantors, especially in the initial stages of a REC, so that social and environmental aspects, at the base of a REC, are always respected prominently. This is also important, since municipalities could put at the disposal of local communities the land or former disused/abandoned productive areas (e.g. former landfills) or disused plants on which new RECs initiatives might be developed (ES-ES, PL-PL, DE-NL). • In addition, municipalities can launch tenders establishing, among the main selection criteria, some specific mandatory aspects to meet wider social economic benefits, including setting a minimum share of local owners among citizens/stakeholders of the local communities (DE-NL).
<p>(STATEMENT 2)</p> <p>NEED TO SPLIT OF THE COMMERCIAL (MARKET ACTORS) AND THE SOCIAL (NON-MARKET ACTORS) PART OF RECs</p>	<ul style="list-style-type: none"> • It would be important to split the 'social' (e.g., the participation process) and the 'commercial' part (the renewable energy infrastructure) of RECs to ensure they receive separate funding. For the 'social' part of the project (e.g., the participation process, renaturation), environmental NGOs could take the lead and apply for funding that are accessible only to non-profit organisations. • The possibility to involve commercial actors (for example those owning the soil) should not be ruled out a priori. They could be interested to invest in the 'social' part of the RECs, as they might want to enhance public acceptance. Furthermore, it could be very helpful for the project implementation and project monitoring to consider a market-neutral team of experts, who can provide advice and help. (DE-NL, PL-PL, ES-ES)
<p>(STATEMENT 3)</p> <p>EXPLOIT PRIOR HISTORIC EXPERIENCE OR EXPERIMENTS IN THE TERRITORY IN SUPPORTING ENERGY COMMUNITY INITIATIVES</p>	<ul style="list-style-type: none"> • In promoting RECs at the local level, it is necessary to start from the defining elements of each community, such as environmental, social and economic issues. It is important to know the history of existing experiences in the renewable energy sector. Starting from the knowledge of these elements can help develop new RECs projects that are more effective and suitable for local communities (ES-ES, DE-NL, PL-PL).

(STATEMENT 4)

SET UP SUPRA-MUNICIPAL POLITICAL AND POLICY GOALS AS WELL A CLEAR REGULATORY FRAMEWORKS

- According to the division of powers, government at supra-municipal level, should commit to setting a quantitative political goal and specific policy/regulatory frameworks for community energy, favouring inter alia, a minimum share of local ownership, a number of new energy communities to be established in the long term (2030) **(DE-NL; PL-PL)**.
- Such political commitment should also favour early notice to local municipalities and their communities of possible renewable energy plans scheduled in their territory by market actors. Equally important is the possibility for municipalities to be enabled to proactively designate specific energy zones themselves. Through the designation of priority zones in municipal land use plans or development plans, municipalities should have the opportunity to install at least a certain number of RECs plants on their own land **(DE-NL)**.
- Another aspect is the need for simplification of administrative procedures which however was brought up by not all transfer teams **(IT-BE, LV-IT)**;
- A sign that red tape is not equally affecting MS. Developing guidelines and training (or other type of capacity building materials or tools) targeted at local governments and citizens on the different legal forms a REC can adopt, including its advantages and disadvantages, are two complementary relevant issues that are still to be fully exploited **(ES-ES, LV-IT)**.

(STATEMENT 5)

FURTHER EXPLORE VIRTUAL RECs AND THE ROLE OF SMART PLATFORMS

- A smarter energy future need to explore further the potential for virtual community-based power plants, by also supporting enabling regulatory sandboxes to support energy innovations, develop pilot projects and specific roadmaps for their implementation.
- All the above mechanisms need to be enhanced to capitalize and distribute benefits among members of RECs and specifically the local communities involved more effectively. **(DE-NL, LV-IT)**

(STATEMENT 6)

LOCAL OWNERSHIP, ACCEPTANCE AND MAXIMIZATION OF SOCIAL AND ENVIRONMENTAL BENEFIT OF RECs

- All transfer teams directly or indirectly support that to increase ownership and acceptance, citizen participation, especially of residents, in the design, realisation and exploitation of RECs is a prerequisite for success.
- 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. **(IT_BE)**
- It is of vital importance to continue to communicate with the local environment, even when progress is slow **(PL_PL)**.
- Focus on the environmental aspects and the multiple benefits beyond economic gains should be centre of attention within RECs projects **(LV_IT)**.
- 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 **(IT-BE)**.
- All the above aspects should also be well communicated, whereby at the initial stage of planning, information material should be (visually) rough enough and stimulate to provide input from the large public **(DE_NL, PL_PL)**.

6 Next Steps

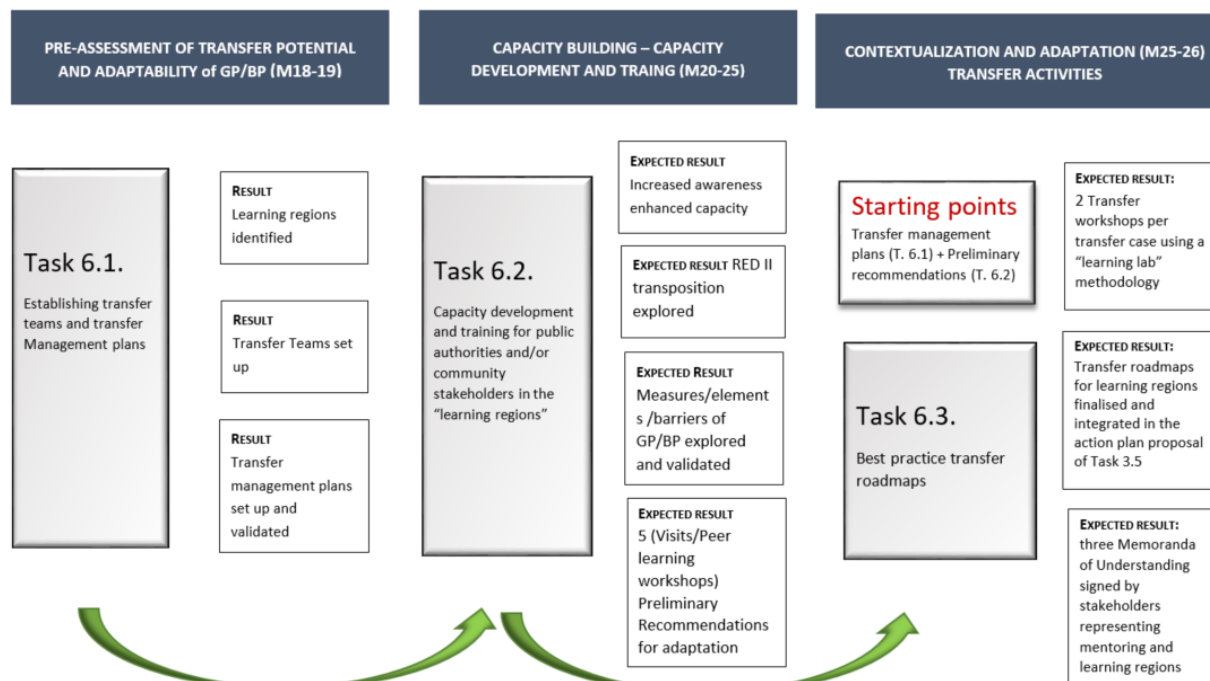
Task 6.2 served as capacity building and as a starting point to the transfer experiments envisaged in Task 6.3 (“Best practice transfer roadmaps”).

Running from M24-26, Task 6.3 will both contextualise and facilitate the adoption of good/best practices in the learning regions that will be part of Deliverable 6.3. “4 Best Practice Transfer Roadmaps for Learning Regions”.

The outcomes of the transfer reports, specifically the capacity building and transfer workshop activities (as summarised in section 5 “*Main outcomes of the capacity building and transfer workshops using the peer learning approach*”) of the present Deliverable, will serve as the basis for the core of Task 6.3 activities. Moreover, they will support the realization of two transfer workshops per learning case developed by the transfer teams. The latter will provide guidance on the necessary political, governance and policy changes to experiment with the best practice in the learning regions.

The **logical diagram** showing the main links among Task 6.1- 6.2 and 6.3 (see Table 53) served as a brief reference on how to maximize the impact and the coherence of the transfer visits and can be useful for the subsequent contextualization and adaptation expected within WP6.

Table 53: Logical Diagram, main links among tasks 6.1, 6.2, 6.3



ANNEX 1 - TEMPLATE OF THE TRANSFER WORKSHOP REPORT

This section below is dedicated to the report template drafted by Ecoazioni, which contains the relevant information for the finalization of the report on the part of Project Partners (PPs). The template will be used by PPs and specifically by the hosted and hosting PPs for the finalization of the transfer workshops reports due on 18/07/2022 at the latest. The reporting activity will have to first and foremost take into consideration the activities carried out by facilitators and rapporteurs during transfer visits/workshops and the input from experts and Transfer Team. All contributions will form part of the Deliverable 6.2 that Task 6.2 Leader (Ecoazioni) will finalise in M25.

The Reports will have to contain:

- a map with the geographic localization of the best/good practice visited;
- significant pictures of the site and pictures of the visit;
- a general technical description as in Table (a).

Table (a): Presentation of the learning region and the country of origin of the good/best practice

LEARNING REGION	
Country	Italy
Learning Region	Apulia
COUNTRY OF ORIGIN OF THE GOOD/BEST PRACTICE	
Country	Belgium
Hosting Region	Flanders

Good/best practice transfer measures selected

In this section, please provide information on the best/good practice and the elements/measures indicated by the transfer teams in Deliverable 6.1 using, for the description, the inputs already provided by Deliverable 5.2 (also extracted by the ppt presentations or other material presented/made available during the transfer visits).

Table(b) Description of the (please select) Italian/Dutch/Polish/Spanish/Belgian Best Practice/s indicated by the learning region as the basis for capacity development and training workshops within Task 6.2 (extracted from Del.5.2. Table 8)

Country of origin	Title of the good practice	Short description	Best practice and model characteristics for adaptation & transfer
		(Please see Deliverable 5.2 for reference)	(Please see Deliverable.5.2 for reference)

Table (c): Details on the Good/best practice transfer measures selected for the transfer visits and capacity building activities by the learning region

Partner country	Learning regions	Responsible partner	Good/best practice transfer measures (Priority I)	Good/best practice transfer measures selected for the transfer visit/s and capacity building activities
				Referring to a): Referring to b): Referring to c): Other:
Legend of the transfer elements/measures: a) <i>governance structures including gaps in the national transposition of the EU directives</i> ; b) <i>legal forms</i> ; c) <i>Business models</i> ; d) <i>cooperation models and financial participation possibilities for local authorities in RECs</i> .				

Table (d): Overview of socio-economic benefits of the Italian/Dutch/Polish/Spanish/Belgian best/good practice (eg. extracted from D.5.2. - Table 5. “Overview of socio-economic benefits in the analysed case studies”)

Energy community	Participation/ ownership	Lifestyle	Low-cost energy bills	Tackling energy poverty	Social cohesion	Local job creation and skills	Direct financial profits
	✓	✓	✓	✓	✓	✓	✓

Table (e): General structure and maximum characters for the informative Fiche presenting the good/best practice that will be part of the transfer activity

Full name of the good/best practice (Country, Region, City of	
Location	
Owner	
Installation date	
Plant's power	
Plant annual production	
CO2 saving	
1. DESCRIPTION	
2. PLANT'S CHARACTERISTICS	
3. RESULTS OBTAINED	
4. OTHER OBTAINED CHARACTERISTICS	

Transfer Team (composition) participants in the activities

In this section, please provide the names and organization of each member of the transfer team, ensuring in advance to having obtained his/her privacy consent in compliance to GDPR Regulations

Table (f): Transfer team composition per learning region

Learning Region (Country)	Good/Best practice transfer measure	Transfer Team		
		COME RES consortium members	Stakeholders/market actors in learning region (Give an explanation why the particular stakeholder/market actor has been selected, scope of working field)	Mentoring experts from consortium and country of origin

Agenda (day one or/and day one and half)

As indicated in Chapter 5 of this document, in this section you will have to provide a full agenda using the template A or B and its possible options (template b - option 1 and template B option 2), indicating names, roles and organizations of each discussant, expert etc.

Please ensure in advance to having obtained his/her privacy consent in compliance to GDPR Regulations.

Training visit (description of the activities)

This section will have to contain a narrative part not exceeding 3000 characters, which contains a description of:

- the introduction and presentation of the good/best practice (as in plenary session – ppt presentation will be included as an annex);
- training module activities.

Recommendations: please be aware that here it is interesting to highlight the process that brought to the identification of the final recommendations.

Training modules (description of the activities)

This section will have to contain a narrative part not exceeding characters, which contains a description of:

- introduction and presentation of the good/best practice (as in plenary session – ppt presentation will be included as an annex);
- training module activities.

Recommendations: please be aware that here it is interesting to highlight the process that brought to the identification of the final recommendations.

Transferability potential of the best practice measures/elements from the region of origin to the learning region

Following the transfer activities, this section will have to make direct reference to the Guidelines and the results emerging from the Peer learning activity. Specifically, you will have to provide:

- a narrative part taking covering all issues raised during the Peer learning.
- a synthesis using Table (g) below.

Table (g): Matrix chart to be used to steer the Peer learning activity

LEARNING REGION: (COUNTRY)					
LIST OF PARTICIPANTS (names and organization)					
NAME OF FACILITATOR (Organization):					
NAME OF RAPORTEURS: (Organization)					
Good/Best Practice (country of origin)	Practical details addressed by the transfer cases	Good/best practice transfer measures selected for the transfer visit (Please refer to Table 1.2. of Annex 1 of Deliverable 6.2 Draft Index)	Potential barriers identified by learning regions in relation to each element/measure (Please refer to Deliverable 6.1 Chapter 4)	Possible overcoming solutions as the result of the lesson learned from the training activity	RACOMMENDATIONS FOR THE TRANSFER ROADMAPS
Good/Best practice (Country)	a) governance structures including gaps in the national transposition of the EU directives	a1)			
		a2)			
		a3)			
		A4)			
	b) legal forms	b1)			
	c) business models	c1)			
	d) cooperation models and financial participation possibilities for local authorities in RECs.	d1)			
	Additional elements outside those indicated in the GA				

A summary in bullet points of all the recommendations as indicated in Box (H)

Box (H) List of recommendations for the transfer roadmaps

Recommendations
Name of the good/best practice (Country):
Learning region (Country):
List of recommendations for the transfer roadmaps: <ul style="list-style-type: none"> • •

ANNEX 2 - TEMPLATES OF THE DIFFERENT AGENDAS FOR THE TRAINING VISITS

Representatives of the learning regions and the consortium partner of the country of origin (hosting PP) together with members of the consortium from the learning regions (hosted PP), will decide on the possible duration of the transfer visits and the capacity building workshops.

The transfer activities will be organised in three modular steps: **a first step dedicated to the introduction and presentation of the good/best practice (plenary session), a second step (transfer visit) and a third step (training module).**

Overall although the three steps are mandatory, project partners can decide to combine them in the agenda in a flexible way, e.g., using a different temporal sequence.

In general terms, these activities might take the length of 1 full day or 1 and half day arrangements. This latter arrangement could be adapted starting with half day as Day 1 of the meeting and a full 1 day as Day 2, according to the specific needs of participants. The training workshops should ideally be organized into the three modular steps as described above and following the different templates A, B.

In the case of one full day arrangement (**see template A**), the agenda will open with the morning session dedicated to the necessary welcome and technical communications on the Good/best practice in preparation to the visit that will follow and close the morning works. The afternoon will be fully dedicated to the peer assisted workshop.

In the case of the 1 and half day arrangement (**see template B**), the agenda will follow the same format of template A for Day 1 in this way allocating more time for the transfer visits. Day 2 (half day) will be fully dedicated to the peer assisted workshop.

As suggested by some PPs as part of the feedback to the draft document transmitted by Ecoazioni on 8/4/2022, alternative options to the template B could be also developed as follows:

- (template B - option 1) in the case the agenda starts with half day (Day 1) and follows with 1 full day (Day 2), the event can start in the early afternoon (e.g. 2 PM) with the introduction and presentation of the good/best practice, followed by training modules activities (peer learning workshop). Day 2 will be then fully dedicated to the transfer visit/s;

- (template B - option 2) - in the case the agenda maintains 1 full day (Day 1) followed by half day (Day 2), the event can start in the early morning (e.g. 9.00 AM) with the introduction and presentation of the good/best practice, followed by the training module on Day 1, and moving the visit to Day 2.

Please note that template B - Option 1 is particularly suited in case of visits to a large and extended good/best practice, or to separate and/or distant good/best practices, as the time dedicated to the visits of different/large sites will take longer than that scheduled for a small single site. In all cases the hosted and hosting PPs will have to ensure the necessary transfer time and possibly the longer distance to reach the sites. Overall and without prejudice, partners can adapt the programmes and the provided templates to their specific needs as the information provided is ultimately indicative.

Two templates of the agenda (template A and B) are indicated below.

TEMPLATE A – Agenda for 1 full day of transfer visit and training module

A	TRANSFER VISIT AND TRAINING MODULE
	Venue and date.....
	PLENARY SESSION (9,00 -10,30)
9,00	Registration of participants (welcome coffee)
9.30 – 10,00	WELCOME (local authorities) Presentation of the H2020 COME RES project and the overall agenda (<i>hosting PP</i>) Presentation of the objectives and political commitment/policy/RED II implementation in the Region (<i>political representative</i>)
10,00 – 10,30	Introduction of the good/best practice and the selected elements (<i>transfer team members and representative of the association/cooperative or stakeholders/citizens/users involved in the good/best practice</i>)
	TRANSFER VISIT (10.30 – 12.30)
10.30 – 12.30	Transfer of participants to the good/best practice site and visit
12,30 – Lunch	
	TRAINING MODULE - PEER LEARNING (14,00 – 17,00)
14,00 – 17,00 – PEER LEARNING	Presentation of the PEER LEARNING and main “rules”/instructions (<i>facilitator</i>)

1. Analysis of the needs of the recipients (learning region). The needs must be expressed in relation to the elements and measures to be transferred such as the following:
 - 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

Further detailed for each transfer case with those aspects of particular interest and potential adaptability identified by the transfer teams and presented in Table 1.2.

2. Assessment of what can be taken on from the experience of the good/best practice of the country of origin presented, considering the main barriers that the learning regions may encounter, as preliminary indicated in Deliverable 6.1, Chapter 4. "Transfer management plans", by each learning region.
3. Assessment of the possible overcoming solutions as the result of the lesson learned from the best practice, that could mostly prove viable in terms of adaptability and transferability potential of the good/best practice in the recipient territory.
4. Identification, for each measure/element of the good/best practice/s, of a set of preliminary recommendations that the transfer team can formulate as part of the capacity exercise, and that could be later used within Task 6.3 when setting the transfer roadmaps during transfer workshops per transfer case, using a "learning lab" methodology.

16,30 – 17,00 - Debriefing of activities: transfer team (hosting PP + hosted PP)

19.30 – SOCIAL DINNER

TEMPLATE B -- Agenda for a 1 day and half transfer visit and training module

B TRANSFER VISIT AND TRAINING MODULE

Venue and data.....

DAY 1

PLENARY SESSION (9,00-12,30)

9,00 – 9,30

Registration of participants (welcome coffee)

9,30 – 10,30

WELCOME by local Authorities

Presentation of the H2020 COMERES project and the overall agenda (hosting PP)

Presentation by political representative of the REGION (objectives and political commitment/policy/RED II implementation);

10,30 – 12,30

Introduction of the good/best practice and the selected elements (transfer team members)

Representative of the Association/Cooperative or stakeholders/citizens/users involved in the project.

12,30 – Lunch

TRANSFER VISIT SESSION (14.00-16,30/18,00)

14,00 – 16,30 (or 18,00 in case of 2 sites)

Transfer of participants to the good/best practice site and visit

19.30 – Social dinner

DAY 2

TRAINING MODULE - PEER LEARNING (9,30 – 13,00)

9,30 – 10,00

Programme presentation (hosting PP)

Debriefing of day 1 activities (Transfer team member)

Q&A

10,00 – 13,00 – PEER LEARNING

Presentation of the PEER LEARNING and main “rules”/instructions (*facilitator*)

1. Analysis of the needs of the recipients (learning region). The needs must be expressed in relation to the elements and measures to be transferred such as the following:

- e. governance structures including gaps in the national transposition of the EU directives
- f. legal forms
- g. activities in the energy market and business models
- h. cooperation models and financial participation possibilities for local authorities in RECs.

Further detailed for each transfer case with those aspects of particular interest and potential adaptability identified by the transfer teams and presented in Table 1.2.

2. Assessment of what can be taken on from the experience of the good/best practice of the country of origin presented, considering the main barriers that the learning regions may encounter, as preliminary indicated in Deliverable 6.1, Chapter 4. "Transfer management plans", by each learning region.
3. Assessment of the possible overcoming solutions as the result of the lesson learned from the best practice that could mostly prove viable in terms of adaptability and transferability potential of the good/best practice in the recipient territory.
4. Identification, for each measure/element of the good/best practice/s, of a set of preliminary recommendations that the transfer team can formulate as part of the capacity exercise, and that could be later used within Task 6.3 when setting the transfer roadmaps during transfer workshops per transfer case, using a "learning lab" methodology.

12,30 – 13,00 - Debriefing of activities: transfer team (hosting PP + hosted PP)

13.00 – Lunch

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