

Deliverable D.T3.3.1

## MINUTES OF CAPITALIZATION WORKSHOP

Activity A.T3.3: Evaluating the replication programme

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Short Description
<p>The Minutes of the capitalization workshop includes a description of the results of the workshop that took place in Savona on June 8<sup>th</sup> 2022.</p> <p>It includes:</p> <ul style="list-style-type: none"> <li>the list of participants in the meeting</li> <li>the topic that have been discussed</li> <li>the results of the discussion</li> </ul>

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# 1. INTRODUCTION AND PARTICIPANTS

The capitalization workshop of the Alpgrids project took place in Savona Campus on June 8th 2022.

The participants in person were:

- *Biard Patrick - AURA-EE*
- *Bichon Noémie - AURA-EE*
- *Bontron Guillaume - Compagnie Nationale du Rhône*
- *Bonvini Barbara - University of Genoa*
- *Bracco Stefano - University of Genoa*
- *Fabianelli Maria - Ire Liguria*
- *Ferro Giorgia - Ire Liguria*
- *Laiolo Paola - University of Genoa*
- *Maschio Esposito Nina - Compagnie Nationale du Rhône*
- *Mazzeschi Alessandro - Municipality of Udine*
- *Motta Pasquale - DeMEPA SRL*
- *Poize Noémie - AURA-EE*
- *Tarpignati Giampaolo - Municipality of Udine*
- *Verardo Francesca - Ire Liguria*

While some partners followed the meeting on line:

- *Ansbacher Patrick - B.A.U.M. Consult GmbH*
- *Dornhofer Andrea - Weizer Energie- Innovationszentrum*
- *Polutnik Klavdija - Energy agency of Podravje*
- *Prajnc Suzana - Selnica*
- *Pratter Robert - 4ward Energy*
- *Robic Tomaz - Energy agency of Podravje*
- *Rothmoser Florian - Rothmoser GbH & Co*
- *Stöhr Michael - B.A.U.M. Consult GmbH*

## 2. TOPICS OF THE CAPITALIZATION WORKSHOP

IRE Liguria, WPT3 leader, in collaboration with the University of Genova, suggested some topics, coming from the analysis of the description of the exchange of experience with promoting organizations that took place in the previous period.

The topics were:

### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?
- Has the government provided specific incentives for energy communities? Can you describe them? Are they managed at national, regional or local level?
- Do you think that business models and incentives can ensure the future sustainability of RECs?

### Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?
- Are municipalities playing an active role in the development of RECs? How?

### Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?
- Is there a mapping of the RECs realized or in progress?

### Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - Private citizens
  - Public bodies
  - Health
  - School
  - Agriculture
  - Small and medium-sized enterprises
  - Large enterprises
- Do you have experience of special cases of RECs?
  - REC where a large energy-intensive energy is included
  - Other

### 3. RESULTS OF THE CAPITALIZATION WORKSHOP

#### Auvergne-Rhône-Alpes Energie Environnement (FR) - Compagnie Nationale du Rhône (FR)

##### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?  
*Energy communities are mainly developed under the scheme of citizen-owned projects: local companies are created where citizens are the main shareholders and usually vote according to cooperative governance. Municipalities and local enterprises can also be shareholders. The citizens are closely involved in the development of the RES projects as volunteers and contribute to the technical and legal implementation of the projects. Most of the project are devoted to the production of electricity: the electricity is injected on the grid and sold through the feed-in tariff but more and more self-consumption projects (individual and collective schemes) are now emerging so business models are also changing.*
- Has the government provided specific incentives for energy communities? Can you describe them?  
*A national law published in 2015 has enabled citizens to take shares in local companies whose object was to produce renewable energy. Before that law, it was quite difficult to have citizen-owned energy communities.*  
*Apart from this regulatory framework, few incentives are addressed to energy communities at a national level. We can mention that the national calls for tenders, which concern rather large-scale utilities, provide some premium if the citizens are associated to the project, and especially to the governance but these projects usually offer minority shareholding to citizens so they are not really "citizen-owned" but rather "co-developed" projects.*  
*Some regional authorities have decided to bring further support to energy communities by offering some subsidies: this is actually the strongest support which is offered (not in all the regions) and which reduce the investment costs at the beginning of the projects.*
- Are they managed at national, regional or local level?  
*See above.*  
*Local municipalities can also help the energy communities but their support is more focused on communication or logistics aspects.*
- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*Incentives are necessary to help the energy communities emerge since they are quite new and have to face specific issues (more costs due to local concertation, smaller plants, local enterprises hired, complicated access to market...). Regarding business models, the fact that energy communities can offer a local furniture of energy, with local consumers buying directly their energy to the EC, has to be supported, since these schemes can offer a better control of the bills compared to the market on the long term, but these business are quite new, not well known by banks, insurances, etc. and meet administrative barriers. Hence, supporting them will help overcome these difficulties and ensure more sustainability.*

## Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?  
*To connect a PV production plant to the grid, a connection request must be submitted to the DSO (namely Enedis in France). Enedis check whether the technical configuration of the existing local grid can host the theoretical maximum power output of the PV plant. If a grid reinforcement is necessary, Enedis assess the subsequent costs, which are entirely to be paid by the applicant. Enedis transmit thus within 2 months a connection offer indicating the price and the delay to realize the grid connection (depending of the reinforcement to be done).*
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?  
*The connection process is not too complex, and if no major works are necessary on the grid, the timing is not necessarily too long. The obstacles are mainly on the economic side: if the local grid is close to saturation, the reinforcement costs may be very expensive. As these costs are to be paid entirely by the applicant whose project involve grid reinforcement ("first come, first serve"), the connection cost can be too expensive regarding the economic balance of the PV project.  
To avoid expensive connection costs, a new type of connection contract is currently being tested: the PV plant output power is limited in order to not exceed the capacity of the grid. Reinforcement works are then unnecessary, allowing a grid connection without additional costs. This solution is obviously temporary, as reinforcements works will be necessary to connect additional PV production assets but this can ease the PV plant connection for a while.*
- Are municipalities playing an active role in the development of RECs? How?  
*Most of the time, in France, REC are citizen initiatives. However, municipalities and other public collectivities are often shareholders of local REC. The aim of the municipalities' participation is not to significantly fund the project: the invested amounts remain low. The objective is mainly to give more credibility to the project toward both bank and future self-consumers. Even if it is symbolic, the involvement of public entity is interpreted as an act of trust towards other parties. Acting as a guarantee of reliability, it will facilitate the financing and enhance the image of the project. This first step, with a strong leverage effect, is crucial to help the REC project start-up and allow its further development by itself.*

## Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*The government has recently realized a national campaign to promote the participation of citizen in RES projects. The national association Energie Partagée also does a lot to promote energy communities and explain their benefits.  
A lot of information is available, but it is not easy to assess what share of the population really searches for it. Businesses are probably a bit less informed, as the main targets of the communication medium are generally the citizens.*
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?



*In France, nearly each Region welcomes a resource centre (“regional network for citizen energy”) which spreads a lot of information on RES projects, energy community schemes, business models, etc. These networks are all coordinated at a national level by Energie Partagée and a lot of experience is also shared at this level.*

<https://energie-partagee.org>

- Is there a mapping of the RECs realized or in progress?  
*The “Energie Partagée” association provides a web-site indicating the French citizen initiatives about renewable energy production: <https://energie-partagee.org/decouvrir/energie-citoyenne/tous-les-projets/>*

#### Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - **Public bodies**
  - Health
  - School
  - Agriculture
  - Small and medium-sized enterprises
  - Large enterprises
- Do you have experience of special cases of RECs? *No*
  - REC where a large energy-intensive energy is included
  - Other

#### IRE Liguria spa (IT) and University of Genoa (IT)

##### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?  
*Collective Self-Consumption models are currently preferred over Energy Communities mainly due to the easier form of agreement.*
- Has the government provided specific incentives for energy communities? Can you describe them?  
Are they managed at national, regional or local level?  
*National incentives are provided on a national basis and derived from a provisional law. The definitive law has been published in November 2021, operational rules are to be published by the end of June 2022.*
- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*Based on the few real cases already implemented, and from the results of simulations done within Alpgriids project, the sustainability of Energy Communities cannot generally be assured but only in specific cases. In the case of Collective Self-Consumption schemes the sustainability is generally assured.*

##### Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?

*For plants below 20 kWp, a procedure based on three website platforms must be implemented: the DSO producer website, the TSO producer website and the GSE Website (Gestore Servizi Energetici – the public body who manages all the renewables subsidies). For plants above 20 kWp, an additional procedure must be activated with the local customs agency (Agenzia delle Dogane) to obtain a licence to produce power.*

- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?  
*The procedures to connect RES plants is too long and complex especially for small plants below 20 kWp. Users need expert technicians to handle the paperwork and the average time for a connection can exceed 6 months*
- Are municipalities playing an active role in the development of RECs? How?  
*In Italy there are a large number of small municipalities, so it is difficult for them to organize effective actions to support the development of renewable communities.*

### Topic III: Knowledge of the benefits of CERs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*Citizens are still not well informed about the opportunities related to energy communities due to the lack of support tools at the local level. At national level RENAEL, the Italian network of the energy agency organized a big event to inform Public Administration on benefits and opportunities on RECs. Also at regional level an information campaign, targeted to PA, is about to start: The campaign aims to make municipalities aware in view of funding from the recovery fund which plans to incentivize the development of CERs in municipalities with a population of less than 5,000 inhabitants. Trade associations are also taking steps to launch training programs dedicated to entrepreneurs.*
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?  
*At present there are no specific offices where to obtain information, general information can be obtained at the district offices that manage the authorization procedures for RES power plants.*
- Is there a mapping of the RECs realized or in progress?  
*At present there are no maps relating to the energy communities under development, RSE (The Italian body for research on the electricity system) has recently started a mapping of the Energy Communities.*

### Topic IV: Cases of RECs:

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - **Public bodies**
  - Health
  - School
  - **Agriculture**
  - Small and medium-sized enterprises
  - Large enterprises
- Do you have experience of special cases of RECs?
  - REC where a large energy-intensive energy is included
  - **Residential Collective Self-Consumption schemes with photovoltaic plants up to 20 kWp**

## Energetska agencija za Podravje (SI)

### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?  
*The first energy communities in Slovenia were developed with the help of energy providers that installed the equipment on private or public buildings. These then provided savings for the energy users in the community.*  
*We started in Slovenia and we have some examples of platforms for mass financing of community solar projects (crowd funding).*  
*For developing RES and RUE projects in cooperation with public authorities' Public private partnership is a common practice in Slovenia.*  
*Considering all identified business models and compared variants, we estimate that Public-Private Partnership, gives adequate legal security to both partners and reliability of the legal relationship. Possible risks between the partners are clearly defined in advance, also addressing challenges regarding future changes to the regulatory framework, changes in support schemes, taxation, subsidies, as well as changes related to more efficient technological solutions, development of battery systems etc. The concession contract also addressing the financial and economic framework with all challenges and safeguards for partners (electricity prices being highly volatile and uncertain given the current market situation).*
- Has the government provided specific incentives for energy communities?  
*No specific incentives for energy communities, but the energy operator is currently preparing a support center for such projects.*
- Can you describe them? Are they managed at national, regional or local level?  
*They will be managed on a national level. Through BORZEN - Slovenian Power Market Operator.*
- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*YES definitely.*

### Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?  
*First you need to contact the local distribution company with a detailed conceptual design (schematic diagram of the PV system), you need to fill an application in order to get a consent for connection to the distribution network. Waiting periods for obtaining permits vary depending on the individual electricity distributor and last from 1 month as well as more than 4 months. The consent is valid for two years.*  
*After project documentation is prepared and all consents are obtained the electricity company must be notified with the time of commencement of work on electricity installations.*  
*Then follows technical inspection of power plant, power plant is connected to the grid and the contract is signed.*  
*A contract on the purchase and sale of electricity for the delivery of produced electricity to the grid and a contract for self-sufficiency must be arranged with the electricity trader in the event that you use the produced electricity for your own use.*
- Do you think that the connection process is too complex or the timing too long?  
*Yes both, it can take more than six months.*

- And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?  
*Depending on the capacity of the network and the power of the house connection, pv plants up to 5 kW should be treated as plug and play devices with just a simple notification to the energy grid operator. For other devices the time schedules have to be shortened.*
- Are municipalities playing an active role in the development of RECs?  
*Yes, they are.*
- How?  
*With local planning procedures and documents, with engaging citizens in the local planning of energy infrastructure and policies, with identifying, financing and operating energy community projects.*

### Topic III: Knowledge of the benefits of CERs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*No.*
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?  
*We the local energy agencies, the national energy agency and some specialized energy providers are currently the only sources of information.*
- Is there a mapping of the RECs realized or in progress?  
*No.*

### Topic IV: Cases of RECs:

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - Public bodies
  - Health
  - **School**
  - Agriculture
  - Small and medium-sized enterprises
  - **Large enterprises**

#### EXAMPLES

- *Slovenia's first collective self-consumption in a multi-unit residential building in Jesenice (north - west Slovenia). Apartment block with 23 apartments with 55 inhabitants. Solar PV investment of 36,400 EUR to be recovered in full within 7 years. Start of operation February 2019.*
- **RES COMMUNITY – BUDANJE**  
*Solar PV installed on roof of local elementary school in Budanje (Slovenian Littoral) and seven residential houses as Slovenia's first collective self-consumption as a RES Community. Expected savings for participants app. 100 EUR/year /participant. Establishment timeline app. 1 year.*
- *The renewable energy community Luče in Slovenia (COMPILE project) has been enriched with nine solar power plants, with the total power of 102 kW, and these are connected to the grid since August 2019. With this step, the village Luče is approaching the goal of lowering cost of electrical energy, solving problems concerning repetitive interruptions and becoming the first self-sufficient energy community in Slovenia which will be able to cover the electricity needs only from RES.*

- <https://www.compile-project.eu/sites/pilot-site-luce/>
- Do you have experience of special cases of RECs? *NO*
  - REC where a large energy-intensive energy is included
  - Other

## 4ward Energy Research GmbH (AT)

### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?
  - *We see that many companies offer to support RECs in different extent. e.g. to support the establishment, to take over the operation and the accounting system or to offer legal consultation.*
  - *RECs itself have to be non-profit but to offer support and take over the operation can be an economic business model.*
- Has the government provided specific incentives for energy communities? Can you describe them? Are they managed at national, regional or local level?
  - *Yes, there is a reduced grid tariff and a reduction of additional fees for the energy shared within a REC. Moreover, there have been subsidies which supports the establishment process.*
  - *Mostly managed on national level*
- Do you think that business models and incentives can ensure the future sustainability of RECs? *We will see. It is an ongoing process and the framework conditions have been changed quickly in the last months due to the strongly increasing energy tariffs but also strongly increasing feed-in tariffs.*

### Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country? *You have to apply for new photovoltaic system at your local grid operator. If there are no technical reasons which speaks against it (e.g overload of the power grid), you normally get the permission. PV-systems mounted on buildings are supported from almost all sides while there is a more controversial discussion for larger ground-mounted PV systems.*
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC? *It depends on the grid operator. Of course, it could be faster and less complex (especially for smaller plants), but in general it is okay.*
- Are municipalities playing an active role in the development of RECs? How? *Yes, they are often acting as initiator of the RECs*

### Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community? *They usually have only a very superficial knowledge and sometimes also a wrong idea what RECs are, and which benefits they can provide.*

- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?  
*Yes, there is a national coordination office “Österreichische Koordinierungstelle für Energiegemeinschaften - [Link](#)) and also a regional contact point per federal state. In Styria the contact point is the Styrian energy agency.*
- Is there a mapping of the RECs realized or in progress?  
*Yes, it is done by the national coordination office [Link](#)*

#### Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - Public bodies - **municipalities**
  - Health
  - School
  - Agriculture
  - **Small and medium-sized enterprises**
  - Large enterprises – *not allowed to participate*
- Do you have experience of special cases of RECs?
  - REC where a large energy-intensive energy is included
  - Other

*Not for running ones but we have recently started a new research project (Energie Werk Weiz) where we investigate the installation of a larger commonly used Redox-Flow Storage within a REC.*

### DeMEPA - Design and Management of Electrical Power Assets (IT)

#### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?  
*Currently two types of business model can be traced in Italy, both strongly related to the existing national regulation:*
  - *the first concerns energy communities, generally promoted by public bodies or environmental associations,*
  - *the second concerns energy communities promoted by private enterprises, coming from the energy or real estate sectors, which provide technical, legal and administrative support in addition to the implementation and management of local generation capacity; they do not become community members but their investing and operating costs are paid by the community through a yearly or monthly fee.*
- Has the government provided specific incentives for energy communities? Can you describe them? Are they managed at national, regional or local level?  
*The existing national regulation provides incentives related to the ‘shared energy’ defined for each hourly interval as the minimum between the local energy generation and the total community consumption. The decree law 199/2021 also states the possibility of financing at zero rate the establishment of energy communities.*  
*Both of these benefits are managed at national level.*



- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*In my opinion the current regulatory framework allows the development of energy communities. There remain barriers for a faster development to be overcome with time. One of these barriers is an administrative one and concerns the absence of models and rules (i. e. the sharing of the investment costs and of the economic benefits granted to the community, how to regulate the accession and withdrawal of members) for the definition of private writing among members which is the starting act of the community. But these limits are of a transitory nature. As soon as some schemes are defined and adopted more extensively, they normally are refined to become effective and replicable schemes in most cases.*  
*Another barrier has a structural character. The members of the community do not have the opportunity to know their hourly consumption and on the basis of the current regulations (based on the 'shared energy') they do not have the possibility to define the most effective size of the local generation to be installed nor to define what will be the related return on investment.*

## Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?  
*The connection of a renewable plant to the grid is neither easy or fast: for plants with a power exceeding 1 MW, at first, it is required a permission to build and once the authorization is obtained the following connection to the network must meet stringent requirements.*  
*In the case of energy communities, the procedure is a little simpler but the rules for connection to the network of the PV plant are the same.*
- Are municipalities playing an active role in the development of RECs? How?  
*The municipalities are certainly a point of aggregation for the establishment of energy communities both for the possibility of making available sites for the installation of the new local generation and because usually the administrators of the municipalities have a greater sensitivity to environmental issues and the energy structure of the territory. The current legislation considers possible facilitations for municipalities that organize and participate in energy communities but the relevant rules are far from coming.*

## Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*Knowledge of the benefits related to energy communities has certainly grown over the last two -three years. Nevertheless, it is necessary to consider in particular for Italy the existence of a regulation concerning the recovery of the building stock and the energy efficiency improvement of buildings that provides a tax refund in five years of an amount up to 110% of the investment. This possibility has catalysed the attention of citizens and businesses, making the energy communities in the background despite the incentives and facilitation provided.*

- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?
- Is there a mapping of the RECs realized or in progress?  
*As far as I know, there are no structures at municipal or regional level providing information on energy communities and even less to map the evolution on the territory.*

#### Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - Private citizens
  - **Public bodies**
  - Health
  - School
  - Agriculture
  - Small and medium-sized enterprises
  - Large enterprises

*Citizens having the municipality or Public Bodies as a point of aggregation; in the case public buildings are easily involved.*

*Agricultural operators are beginning to show some interest after it has been clearly defined that through the energy communities they can use biomass or biogas that until now benefited from incentives now in advance of deletion.*

*About the small and medium enterprise note has be taken of their increasing interest in the light of the new regulation in force since last November (mainly in connection with the extension to 1 MW of the maximum power allowed for the community and that the members of the community can be powered by the same primary station).*

- Do you have experience of special cases of RECs?
  - REC where a large energy-intensive energy is included
  - Other

*I am aware of early projects to establish renewable energy community, but no case of community formed and operational.*

#### Rothmoser GmbH & Co. KG (DE)

#### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?
  - *Mieterstrom (tenant electricity self-consumption) for sharing self-generated electricity behind the main connection of a building to the grid or several buildings in case they share the same main connection*
  - *energy communities as investors*
- Has the government provided specific incentives for energy communities? Can you describe them? Are they managed at national, regional or local level?



*Energy communities in a sense of investing and operating pv- and wind-energy-plants have a slight advantage over common investors: Energy communities are exempted from the obligation to tender for PV power-plants*

*(usually no fixed feed-in tariff, but obligation for tender for pv plants larger than 750 kW and for wind power plants) This reduces complexity and increases the profit for energy communities compared to other investors.*

- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*Not sure, as sharing models involving the public electricity grid are not enabled. Mieterstrom models (sharing behind the main connection, that generally is within the same building) are still not popular, as metering and legislation aspects are complex and the owners' association has to agree (easier in new buildings, but problematic in existing buildings).*

## Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?
  - *Plant investor sends registration to grid operator (registration is a 3 page form)*
  - *Grid operator checks if the planned plant size is possible at the location (if grid is strong enough)*
  - *If plant size is ok, the plant investor can start building the plant*
  - *Plant operation can start, once the grid operator has received the feed-in contract and the grid connection contract and the grid operator has installed the meter.*
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?  
*No, connection process takes only one week or so (speaking for small plants <200 kW)*
- Are municipalities playing an active role in the development of RECs? How?  
*No.*

## Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*Not sure. Legal framework is not really supporting.*
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?  
*Yes, for example Energy Agency Munich/Ebersberg*
- Is there a mapping of the RECs realized or in progress?  
*No*

## Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - Public bodies
  - Health
  - School
  - **Agriculture**

- Small and medium-sized enterprises
- Large enterprises
- Do you have experience of special cases of RECs? *No*
  - REC where a large energy-intensive energy is included
  - Other

## Municipality of Udine (IT)

### Topic I: Business model and economic sustainability of RECs

- Which business models are developing in your country for the realization of energy communities?
- Has the government provided specific incentives for energy communities? Can you describe them? Are they managed at national, regional or local level?

*According to the guidelines published by ARERA, National Authority for Energy Grids Regulation and Environment (5 August 2020):*

- *each community member maintains the relationship with its energy provider;*
- *the energy community is a juridical entity such as a consortium, a cooperative or an association;*
- *each community member must be physically connected to the LV distribution network and powered by the same MV-LV substation;*
- *the shared energy is incentivized at 11 c €/kWh by GSE;*
- *the shared energy is also incentivized by a reduction of transmission (referring to the TRASE tariff) and distribution (referring to the highest value of the BTAU tariff for the month considered) grid fees;*
- *the energy injected into the grid can be sold on the electricity market or can be purchased by GSE (Gestore Servizi Energetici - National Energy Services Operator) at a guaranteed price within the regulatory system of "Ritiro Dedicato" (dedicated withdrawal), according to the ARERA's directive n ° 280/07.*
- Do you think that business models and incentives can ensure the future sustainability of RECs?  
*Not properly. In Italy you can perceive some scepticism among citizens and energy experts about LEC legislation and its implementing rules. Moreover the economic advantages ensured by the incentives is not comparable with the advantages previously enjoyed by the citizens through other instruments in support of RES such as the "Conto Energia", active in Italy until a few months ago. The private sector is generally aware of the considerable legislative effort produced by the EU and the national legislators who transposed EU directives at national level. But this legislative process, which lasted years, has resulted incentive schemes granting limited economic advantages, not up to the sustained legislative effort.*

### Topic II: Management, administrative aspects (reference schemes) and role of municipalities

- Can you briefly describe the process of connection to the grid for production plants from photovoltaic sources in your country?
- Do you think that the connection process is too complex or the timing too long? And if so, are there any simplifications or accelerated procedures for plants that are part of a REC?
- Are municipalities playing an active role in the development of RECs? How?

*Currently Italian LAs are assuming a higher and higher degree of responsibility as to the ecological transition issue. In their planning tools (mainly energy plans and SECAPs) for some time now there*

*have been measures promoting energy saving and adaptation/mitigation to climate changes. That said, the LEC issue is starting to circulate among public decision-makers who are very interested in the relevant legislation and implementing rules. References to LECs get to appear more and more often in LAs' policy programmes and in specific measures within their planning tools.*

*As to information needs on LECs coming from the private sector, LAs are taking charge of it by organizing events in presence and webinars in collaboration with other actors active in the energy matters such as Energy Agencies, Regional Administrations and associations representing municipalities at national level.*

*The event organized by the Municipality of Udine in May 2022 registered the participation of 120 local administrators from all over Friuli Venezia Giulia Region.*

### Topic III: Knowledge of the benefits of RECs

- Based on your experiences, do you think that citizens and businesses are generally well informed about the benefits of an energy community?  
*No, probably they aren't. But as the economic advantages offered through LECs are quite limited citizens are not really motivated about deepening their knowledge about LECs and their environmental positive effects.*
- If a citizen or a company wants to be part of a REC, are there municipal or regional offices where it is possible to obtain information?  
*Yes, in Udine citizens can put their questions to the APE (Energy Agency of Friuli Venezia Giulia). Moreover Municipality of Udine recently encompassed (September 2021) into its new SECAP two measures implementing and supporting two communication initiatives on energy and LECs in particular: the enhancing of the "Sportello Energia" in collaboration with APE and the establishment of an information hub structured according the "one stop shop" scheme.*
- Is there a mapping of the RECs realized or in progress?  
*No, not as far as we know in Udine*

### Topic IV: Cases of RECs

- What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?
  - **Private citizens**
  - **Public bodies**
  - Health
  - School
  - Agriculture
  - **Small and medium-sized enterprises**
  - Large enterprises
- Do you have experience of special cases of RECs?  
**No**
  - REC where a large energy-intensive energy is included
  - Other

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What are the types of users or sectors most frequently involved in RECs projects in your country (select a maximum of 3)?

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