

Self-training modules for citizens and potential UP-STAIRS Implementation Champions

Deliverable 6.6



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1. Introduction

This document addresses all the materials created during the UP-STAIRS project lifetime to train citizens and potential future Implementation Champions. It was undertaken in line with the Grant Agreement No. 892037 under the European Union's Horizon 2020 programme. It is not intended to be a detailed document, as the detail is contained on the materials that will be described below.

The first materials that were created to this end were the modules for the first training of Implementation Champions in M18 and M19. As per the training plan reflected in Deliverable 2.5, these modules were divided in general modules that could be applicable and transposed to other regions and specific modules tailored to the UP-STAIRS pilots. These modules (in PPT and PDF format) have been reviewed after the first edition of the UP-STAIRS training and can be found in the Digital Platform.

Drawing from these modules, the training of Implementation Champions was recorded in the pilot of Cork, since it was the only pilot providing the training in English language. Therefore, this set of seven videos, one corresponding to each module (except for the one explaining the Digital Platform), also take part of these self-training materials. These videos have been posted and are available on the Digital Platform too.

In addition to the mentioned modules and in order to expand and improve the self-training materials, two more documents have been created for the present Deliverable:

- A guide for the creation of One-Stop-Shops (OSS) to promote Energy Communities.
- Guidelines for financial and organisational schemes for community energy.

The former has been elaborated by ECO, in collaboration with ESEB for the English translation and IERC for its review. It encompasses all the necessary steps to set-up and run a community energy OSS. Furthermore, it tackles the benefits that this kind of OSS involves for citizens, the different possibilities for the OSS structure, including a friendly-user economic sizing tool in Excel. Moreover, the guide explores the variety of services that can be offered in these OSS, key tools and advice to work with energy communities, as well as some social, economic, and environmental impact indicators.

On the other hand, the second document has been carried out by IERC and SEC in order to supplement the content of the previous guide. This document focuses on the procedures to select the most appropriate financial schemes for collective action initiatives in OSS, including some basic notions on appraisal techniques to evaluate the economic viability of renewable and energy efficiency projects. The end of this document collects a summary on the most common organisational forms of energy communities.

In addition to these guides, this Deliverable includes also a set of materials that describes the experience of the ASEN One-Stop-Shop in an interview with the Energy Communities

Repository (ECR) as well as its participation in a webinar titled “Setting up Community Energy One-Stop-Shops”, together with other Community Energy OSS across Europe. Furthermore, this set of materials encompasses the agenda of the webinar, the PPT presentation and a list of full addresses of the new energy communities set up thanks to ASEN OSS in multifamily buildings.

2. Annexes

1. Guide for the creation of OSS to promote local energy communities.
 - 1.1. Economic sizing tool for the implementation of OSS offices.
2. Analysis and Guidelines of Financial and Organisational Schemes for Community Energy.
3. OSS ASEN in Energy Communities Repository.
 - 3.1. Agenda of the Webinar “Setting up Community Energy One-Stop-Shops.
 - 3.2. OSS ASEN PPT presentation.
 - 3.3. List of full addresses of the newly established energy communities of multifamily residential buildings, assisted by OSS ASEN.

GUIDE FOR THE **CREATION OF OSS** TO **PROMOTE LOCAL** **ENERGY** **COMMUNITIES**



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List of acronyms

CCE	Citizen Energy Community
LEC	Local Energy Community
OSS	One Stop Shop
SME	Small and Medium Enterprises

1. Background

The arrival of energy communities

The **climate emergency** has become an urgent and ubiquitous concern. It is evident that we must move beyond setting distant CO₂ reduction targets without concrete action plans. Addressing climate change requires a shift in our collective thinking and a commitment to managing it collectively. The pivotal challenge lies in our energy model, where energy policies cannot be isolated from environmental or socio-economic considerations. Energy permeates nearly every aspect of our lives.

Citizens are increasingly aware that we must take collective and grassroots action, building networks that enable us to forge new relationships with Earth's resources and with each other. It's time for a paradigm shift toward a collaborative and sustainable future.

All over the world, local initiatives are emerging to change a key aspect of the climate emergency: the production, management and distribution of electricity with renewable systems and - here is the biggest novelty - in a **sovereign and collective** way, reducing dependence on large energy corporations. This is how the so-called *local energy communities* emerge.

Energy communities have gained prominence with the support of the European Union and are now a widely discussed concept. These initiatives are driven by citizens who come together to address and oversee their energy requirements, all while prioritizing environmental and social considerations. While the scope of these initiatives can be quite holistic, the most prevalent activity, and often a starting point for community projects, is the decentralization of energy production through shared photovoltaic self-consumption.

On the other hand, we find a political commitment to energy communities, including the definition of the different typologies, the creation of a new specific regulation and the economic impulse at different administrative levels: from the municipal to the European level.

Energy communities play a key role in the way we relate to our environment and aim to transform the energy model through citizen empowerment. This empowerment can take the form of citizen-led or participatory projects, in which the local administration is the leader, always being projects rooted in the territory, and with clear social and environmental objectives. In this sense, we want to highlight the idea that the importance of energy communities goes beyond the generation of energy from renewable sources: we are talking about the democratization of energy and the empowerment of citizens, to the point that people can finally take sides in the electricity market and become more sovereign and self-sufficient.

Energy communities, which are a key tool towards the Sustainable Development Goals, focus on SDG 7 (Clean and Affordable Energy), which not only aims to guarantee access to energy but also to make energy sourcing a key factor.

Climate change is advancing, the time to comply with international obligations is shortening and renewable energies must be produced locally, and not imported from abroad. The non-urban territory is subject to a demand for collaboration in the deployment of renewable production infrastructures that can only be demanded if the urban territory demonstrates a commitment. In this sense, the potential for deployment of energy communities is high, both in rural and urban areas.

However, the most present barriers to the deployment of LECs are not technical, but social, as they involve the organization of the citizenry. This is where One Stop Shops (OSS) can play a key

role in triggering the creation of energy communities and boosting their proliferation and offering support in different aspects.

In addition, the OSSs should be information points that allow citizens to become empowered and sensitized to make a more optimal self-management of their energy supplies, get to know their energy rights, as well as to learn about the possibilities offered both in terms of rehabilitation and renewable energy generation, and the existing aid and subsidies, if applicable.

Territorial competitiveness

Energy communities are also an element of territorial competitiveness for companies. For this reason, the OSS will also encourage public-private collaboration for the deployment of energy communities.

The availability of decarbonized energy, as inexpensive as possible, close and safe, can become a survival factor for many organizations. The research, development, production, installation and maintenance of renewable energy production and distribution devices will be a relevant economic sector that will depend on the quantity and sophistication of the demand for proximity.

Legal body

To create an energy community, it is convenient to create new forms of legal bodies of consumers/producers. The OSS will guide the interested groups in the definition of the most appropriate legal form.

Citizen empowerment

To promote energy communities, it is also important to empower citizens in the field of energy: as consumers, as potential producers, as energy managers in their own homes. Energy and the energy market can be complex for a large part of the citizenry, which limits the participation in energy communities of many profiles of the population that have no knowledge of energy. It is for this reason that we believe that in order to promote energy communities it is essential to carry out in parallel a task of dissemination about energy, as well as individual support and accompaniment, so that this task can lead to an increase in energy communities and also in the profiles of people who are involved in it.

2.Objectives

This aim of this document is to serve as a valuable resource to streamline the establishment of OSS (One Stop Shop) offices dedicated to energy services, offering comprehensive support in various facets of energy and supplies. These offices serve as accessible hubs where citizens can seek guidance and information pertaining to the management of their individual or collective energy needs, along with closely related areas.

Moreover, while the overarching goal is to promote energy communities, it is acknowledged that the path to fostering collective organization begins with empowering individuals in the realm of energy. Therefore, these OSS offices are designed not only to provide collective support but also individualized advice and guidance. Through these individual interactions, a network of connections within the community will be cultivated, encouraging citizens to come together and form energy communities.

In essence, the primary objectives of this document are as follows:

- Offer comprehensive guidance in shaping the internal operational structure, economic planning, and allocation of material and human resources for the OSS offices.
- Provide practical tools to facilitate the effective implementation of OSS.
- Establish protocols and standardize the operational procedures of the OSS offices.

By achieving these objectives, we aim to create a seamless framework for the successful deployment and operation of OSS offices, enhancing their capacity to support and empower citizens in matters related to energy management and community building.

3.Implementation of a One-Stop-Shop

Benefits

The benefits of having an OSS that promotes energy awareness and citizen empowerment are several, and its positive impact will reverberate in various sectors of society:

Table 1 Benefits among the different target groups

People living in the territory	Home energy improvements: • Increases physical and mental health and quality of life • Increased comfort and safety • Reducing the cost of utility bills • Reducing the risk of energy poverty • Increasing the income of the cohabitation nucleus • Extends the life of the dwelling in habitable conditions • Increasing the value (and price) of housing • Reduce maintenance costs
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	• Decrease energy demand The OSS will also provide support in individual and collective processes related to a subject that is socially perceived as complex: energy.
Energy professionals sector	• The OSS increases the demand for energy products and services, resulting in a boost to the local economy, hiring and job specialization.
Public sector	Investment in energy improvements and the creation of a local OSS drives: • A reduction in social investment and fuel poverty • A more resilient local economy in the face of crises and pandemics • Compliance with environmental obligations • Decarbonization of the municipality • Increased capacity for public-private collaboration • A reduction in illnesses associated with poor air quality, lack of sanitation, lack of thermal and acoustic comfort, etc. • A reduction in the number of visits to health care centers • A reduction in mortality and illnesses related to cases of energy poverty.

4. Structure and typology

Structure

First of all, it should be noted that given the multiple casuistry, both in terms of the type of municipality and the availability of economic resources, it is necessary not only to assess what type of OSS we can offer, but also which one we believe can have the greatest impact on the municipality. Often a combination can be an effective way to address the different cases. The different typologies are outlined below:



- On-site service

Face-to-face service involves designating a space for public attention, and different materials to hand out to citizens in the event that it is convenient to give them information in hand that they can retain, as well as a computer to process cases, doubts and relevant requests. Although it usually implies more time of attention per person, the citizens who come to the office usually value very positively this type of closer attention, which also allows them to see together the concepts that are explained and reinforces

citizen empowerment. It should be taken into account that it will most likely involve more management hours in terms of scheduling visits.

Face-to-face service usually has a good impact when the population density is high and there is a large number of citizens living relatively close to where the service point is planned to be located, or when it requires traveling short distances for the rest of the citizens (it is convenient to take into account the availability of public transportation when deciding the location of the face-to-face service point).



- Virtual attention (by e-mail and telephone)

This type of service can be interesting because it does not require its own space for customer service, especially in municipalities where the population is widely dispersed throughout the territory, so that setting up a point of face-to-face service involves considerable travel by citizens. The service to be provided is usually faster and is often convenient for resolving specific doubts. On the other hand, in the cases of accompaniment in which procedures are carried out, experience shows us that often, when it is necessary to request documentation from the users, the procedures are usually lengthened by establishing contact only in a telematic way. However, it can be an agile service for cases in which information or advice on household supplies, for example, is required.

In these cases, we also recommend establishing a defined opening hours for the public. These hours can be more or less extensive (days per week and hours of operation) depending on the municipality's available resources and the expected volume of queries.



- Itinerant

For municipalities with few economic resources, it could be considered whether a supra-municipal entity could provide an itinerant OSS that travels to different localities following a specific schedule. This would be an advantageous option for small municipalities because it does not imply the hiring of personnel by the local administration.

However, it is necessary to ensure that the public is aware of the existence of this itinerant OSS and the days on which they can make use of this service.

Scope of the service

When we think about the attention we want to offer to citizens from the OSS, there are different types of intervention, depending on the level of personalization of the service and the degree of involvement of the OSS staff in the desired hours. We define three typologies: information, personalized advice and accompaniment, which are described below.



Information

We define information assistance as the resolution of doubts or the search for knowledge about energy supplies, self-consumption, rehabilitation, grants and subsidies for efficiency and/or renewable energy projects. This service is considered generic and does not go into the details of each particular case, although it may have the ability to function as a first filter and refer interested persons to professionals who offer the

services or advice they need. It can be done by e-mail, through a telephone hotline or in person at a point of attention to citizens.



Personalized advice

We understand advice as the attention in which the interested person can go to the information point with documents that refer to their supplies (invoices) or self-consumption or rehabilitation projects, among others, so that the technician can assess the state of these and make the corresponding recommendations. In these cases, it is necessary that the person in charge of the advice has technical training to be able to assess the supply contracts and recommend users to make contractual modifications according to their needs, as well as to be able to assess the projects and budgets that third parties may have offered to citizens for self-consumption or rehabilitation projects (or refer them to local companies that can do them, if this is the reason for the visit), or guide them towards one type of solutions or others according to their case.



Accompaniment

We understand accompaniment to be the final step (having made a previous assessment), which would involve providing support in the management and procedures that arise once the assessment has been made. In the case that accompaniment is not provided, it is understood that the informant will guide the user so that he/she can carry out the procedures and formalities autonomously (empowerment), while accompaniment implies the involvement of the technician in the required procedures, thus extending the personalized attention but ensuring that the procedures are carried out effectively. This would be, for example, to carry out tariff modifications in supplies, or to help in the processing of subsidies that the interested party wants to apply for self-consumption or rehabilitation projects, etc.

It is important to be clear about the scope of the OSS and the degree of involvement we can have as workers in each of the cases attended and, if appropriate, to explain to the people attended what the limitations of the service are.

Portfolio of services

Technical

The technical consultancy service has a strategic component for the operation of the OSS. The different projects or initiatives will receive support in technical aspects (e.g., assessing the potential of RES, sizing of facilities, management software, training for budget analysis, or matching the project with technical regulations). The objective of the consultancy is to answer the doubts that hinder the development of projects and initiatives and to connect the citizens with the actors of the territory that can carry out the technical tasks in local projects.



Administrative



The administrative consultancy will be focused on training and the development of tools so that the initiatives can be carried out with efficient structures. The services will focus on finding *ad hoc* solutions related to data management and processing, as well as the centralization and simplification of administrative processes with external actors, such as energy distributors and/or marketers. The objective is to provide tools and support in processes that are often a barrier to project implementation, such as interaction with other actors, including the electricity distributor or marketer, providing the initiatives with model documents and channels that facilitate the administrative management of the projects.

Legal

The legal consultancy will assist in the definition and legal constitution of the different initiatives, as well as in their subsequent operation. In a second level, it will accompany in the elaboration of legal documents of different nature, such as the definition of regulatory bases or processes of subcontracting of services. The service will advise each project according to its particularities in the constitution of its legal figure, and will accompany it in the constitution process, through the experiences learned in previous projects and creating common materials such as statutes or internal regulations. The service can also address the legal side of technical aspects or transpositions of European directives concerning LECs. The legal consultancy will also provide support to ensure that projects using the service comply with and are aware of the relevant data protection regulations, and have efficient and secure mechanisms for managing confidential information.



Economic and social consulting

The economic and social consultancy will accompany the projects in the development of a business plan and economic viability, and will guarantee not only their successful implementation, but also their long-term sustainability, taking into account numerous factors, such as financing, citizen participation and regulatory changes, among others. In the social field, the service will first focus on supporting the dynamization of groups and collectives so that they can develop into self-organized groups. Support will be given in conflict resolution, in favor of diversity and through access to facilitation professionals and specific training resources. The service can also provide governance tools to strengthen the internal functioning of energy communities.



Guidance on the financing of LECs

As funding is one of the main barriers for incipient LECs, it is interesting to offer guidance on available grants and support in the submission of applications. The objective is to facilitate the attraction of external resources for local projects and to accompany the municipalities in the presentation of the above-mentioned applications. This service can also provide support to citizens involved in energy community projects to overcome the economic and administrative barriers they may face.

Support in the elaboration of ordinances to promote LECs

Finally, with the aim of encouraging collective self-consumption due to the transformation potential that energy communities have, advice on the drafting of ordinances promoted by the OSSs can also be considered. The ordinances could then subsidize self-consumption installations, creating or improving tax incentives to promote the use of renewable energies through individual and shared self-consumption systems. Model documents can be provided to facilitate the process, as well as developing proprietary tools to facilitate the calculation of the costs that the rebates will entail on the part of the municipality. The activity would be carried out on an ad hoc basis and could be reviewed on an annual basis along with the ordinances.

Human resources and associated materials

Categorization according to municipality

This section is dedicated to the correct sizing of the human resources of the OSS offices. For this purpose, a support tool has been developed in Excel that takes into account different categories of municipality. The variables to be considered are population, population density, surface area of the municipality, and the type of attention and service to be offered. Based on these variables, the tool makes an estimate of the number of services that could be provided annually, the work hours involved, and recommends the number of people to hire.

In order for the tool to provide us with the results, we only need to enter some data of the municipality we want to evaluate. The calculations have been developed based on real data and estimates taken from the implementation of OSS in the Barcelona Metropolitan Area.

Sizing of resources

First, we find the tab **Basic_data**. It is here that we must indicate our municipality, the number of inhabitants and the area (in km²). The density and the indicators below are calculated automatically. Next, we must indicate on the right the type of office and attention we want to offer:

choose your municipality	
Municipality	
Inhabitants	9000 hab
Surface	8,0 km2
Density	1125,0 hab/km2
Type size	
Typology density	

Type of care	Yes	% of attention
On-site	Yes	70%
Virtual	Yes	30%

Type of service	Yes
Information	Yes
Consulting	Yes
Accompaniment	Yes

Fill in if both types of care are checked, specifying the percentage of each one.

Figure 1 OSS sizing tool. Source: Ecoserveis

It is necessary to indicate whether we want to provide face-to-face care, virtual care or both, selecting "Yes" or "No" in each care format. In the case of wanting to provide both types of care,

we are asked to specify in the right-hand column what percentage of this care will be face-to-face and what percentage will be virtual (the sum of the two percentages must be 100%).

Finally, further to the right, we are asked to specify which types of care we are interested in providing. We can select as many options as we wish, indicating "Yes" or "No" in the corresponding box.

Once the data has been filled in, we can visualize the results in the **Sizing** tab. It allows us to see a table with the results obtained, as well as graphs showing the number of hours dedicated to each type of service, and the hours of management/coordination of the office. We can also see the number of people attended, the number of services/visits, and the staff that would be necessary to hire according to the hours involved in the deployment of the service (adapted to the casuistry of each municipality according to its population and density).

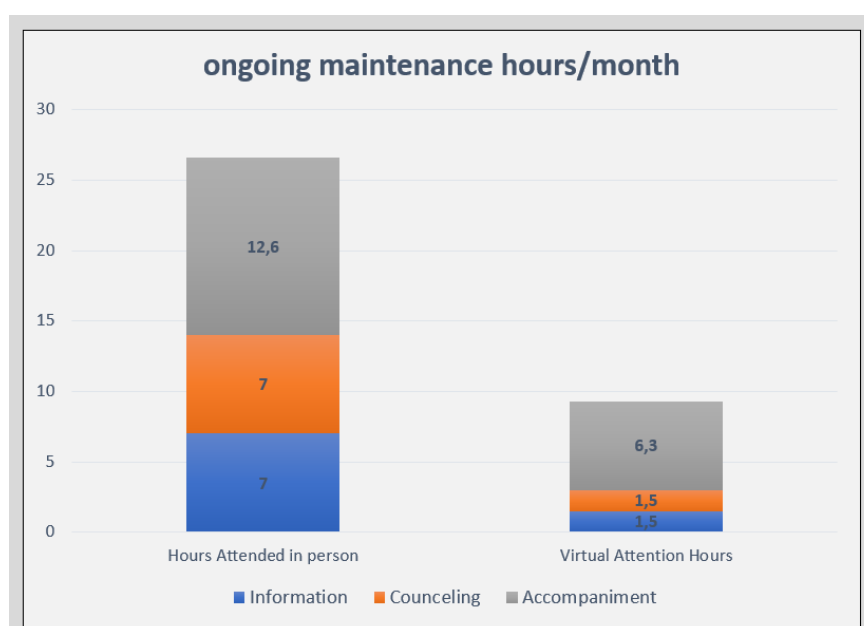


Figure 2 Example of effort for the sizing of an OSS. Source: Ecoserveis

After seeing the results, we always have the option of going back and modifying some variables, if we are interested in modifying the service and adapting it, and see again what changes are involved, until we are convinced by the result obtained.

Internal structure. Human resources profile

The office, following the One Stop Shop model, should offer technical, administrative and financial assistance. For this reason, it is recommended that the office staff should have a set of competencies and skills to be able to offer the highest quality service to the inhabitants of the municipality. The following is a set of proposals on staff profiles to be contracted, with the aim of serving as an inspiration and/or model when drawing up public procurement specifications. Each municipality will have to adapt the personnel and profiles to its casuistry. The following are indicative proposals.

Thus, the competencies, without being a closed list, consist of:

- Technical knowledge of energy supplies, energy efficiency and renewable energies
- Design of and implementation of governance structures.
- Knowledge of processing and management of subsidies
- Knowledge of marketing, communication and design

- Knowledge of financial solutions
- Administrative and customer service knowledge
- Knowledge in the management of people in situations of energy poverty, vulnerability, etc.

In accordance with the above considerations, the market and impact study proposes different profiles that can define the structure of the office (depending on its size according to the dimensioning). The configuration of the team may vary over time, adapting at all times to the needs and requirements of the municipality. However, we define five professional profiles, complementary to each other.

- **Program Manager.** A person with a managerial profile who is responsible for coordinating the team's tasks and daily operations, resolving incidents, supporting and participating in the organization of dissemination and communication actions (information sessions and webinars), as well as being in charge of the dynamization and promotion of the conception phase of energy communities.

- **Energy expert.** Personnel specialized in energy efficiency and renewable energies who will be responsible for accompanying and advising citizens, and accompanying them in the creation of energy communities. They will be responsible for evaluating the rehabilitation measures that apply in each case and drafting a report with the costs, energy savings and amortization of each project, if it is suitable for the services to be offered.

- **Community agent.** This person will be in charge of mediation tasks in homeowners' communities and of providing advice to citizens on the creation of energy communities and on energy in general. His/her tasks will be complemented with those of the energy expert, and this community agent will set up a previous phase that will allow the social barriers to be overcome, so that later the rest of the team can develop the technical part.

- **Back Office.** He/she will be primarily responsible for the first customer service, either in the office, by email or by phone, scheduling visits, managing the digital platform and carrying out administrative procedures. On the other hand, this profile will also be in charge of the comprehensive management and processing of municipal, regional, state and European subsidy files. In addition, he/she will manage the corresponding administrative files that allow the processing of public funds in application of the legal framework, the bases and the corresponding calls and, on the other hand, he/she will carry out the technical verification of the subsidized actions that will result in the obtaining of public funds.

- **Communication, marketing and design.** He/she will be in charge of designing and implementing the communication and dissemination plan, including social and digital marketing actions, management of social networks and design of graphic and audiovisual material, with the aim of raising awareness of the office and attracting more neighbors with the intention of developing projects to improve their homes.

5. Tools for working with energy communities

What is an energy community?

Let us review the definitions provided by current European directives:

Renewable Energy Communities (RECs), *EU Directive 2018/2001*

They promote proximity renewable energy installations.

Shared characteristics: open legal entity, voluntary and autonomous participation; partners or members can be individuals, SMEs, entities or local authorities; the main objective is to offer environmental and social benefits and economic savings to members or partners in the environment. They are organized to transform their neighborhood, village, town, city, county, or country towards a 100% renewable, inclusive, democratic and collectively owned energy model.

It is important to note that a REC is not limited to electricity from photovoltaic installations, although in many cases it is a starting point for starting up the community.

These communities deploy a series of actions in various fields, such as the promotion of new community-owned renewable energy generation plants, energy exchange and management, training and mobilization of citizens, sustainable mobility and air conditioning, and energy efficiency.

Citizens' Energy Communities (CEC), *EU Directive 2019/944*

Unlike RECs, this type of community is involved in the distribution, supply, aggregation and storage of energy, and can also provide demand aggregation services, etc., always linked to the electricity market. They also differ from the first typology in that they can obtain financial returns from their activity.

Steps to start an energy community

First of all, it is necessary to form what we call the **motor group** or **driving group**, which will be the first partners motivated by the project who will be in charge of recruiting other members to the energy community. It will depend on the context, it can come from a group of motivated **individuals**, driven from a **social entity** or **association**, the **city council** itself, a **group of companies**.

To broaden the number of people interested in participating in the community and expand the driving group, we recommend doing the following:

1. **Search for references and success stories:** this can help us to better understand the scope of the possibilities offered by an energy community and how existing communities work. It is essential to be clear about the project in order to be able to explain it. It is important to be able to identify who participates, with what legal forms, what economic resources are necessary, what management tools we will use, what challenges and barriers we will have to face.
2. **Identify possible allies:** they can be citizens, local entities, companies or the local public administration.

3. **Disseminate and create a network:** through the development of awareness-raising activities that also serve to attract interested persons. In addition, it is recommended to plan a dissemination campaign that includes communication tasks.

Having said this, the driving group must work out which community model is proposed according to different variables, which must be communicated to the interested persons who could potentially form part of the community:

- **Objectives:** remember that the objectives of a CEL are to move towards the energy transition, that is, to obtain environmental benefits while increasing energy sovereignty, better self-management of energy resources and economic savings, always promoting the local economy.
- **Participants and roles:** be clear about what type of participants there will be in the community and in what percentage. It may be a totally citizen initiative or it may be, for example, an initiative led by the local administration, in which the citizens participate, etc. Also, what will be the requirements to be part of the community.
- **Contributions and fees:** define whether the members will contribute an initial fee, or an annual fee, or if they will be fees subject to specific projects each time they are proposed, etc. The capital contributed will be used to cover management expenses and the projects developed by the community.
- **Financing model:** in relation to the previous point, it will also be necessary to analyze whether the financing can be supported by grants and external financing or whether the projects will be directly financed by the contributions of the partners, etc.

In order to generate community, it is necessary to work on different axes:



Governance: Do we want decision-making to be done collectively, transparently and through direct democracy? This would be the case where 1 person = 1 vote.

The governance model will determine in part the legal form we want to adopt, and vice versa. If we opt for the case described above, we recommend creating a cooperative or an association.

In the event that the public administration is the driving force and main manager, and the citizenry has a passive role, it may be that another legal form is chosen, since governance at the internal level will be different.



Participation: Members must have the information, knowledge, tools and channels to understand the decisions being made and be able to participate in them. This is key to maintaining a sense of community. Participation must be **direct, binding, structured, diverse and respectful**.



Training: We can divide it into two typologies:

Internal: for community members to acquire knowledge. This is a key factor to ensure that they can later participate and vote with the certainty of understanding what is being decided. Training can be done through talks, courses, round tables, etc. that can be developed internally or by contacting an expert local entity that can organize a training session.

External: the community can decide to raise awareness in society by being proactive and organizing citizen-oriented training sessions, which also offer the possibility to participate in the community and also be used as a recruitment tool (or not).



Dissemination: It can focus on getting new participants for the community, through informative talks, publications in the media or social networks, posters, activist actions, etc.



Social action: It is important for the community to consider being as inclusive as possible, and to contribute to the reduction of energy poverty and the discrimination or exclusion of certain groups, and to consider orienting recruitment to ensure the participation of these groups whenever possible.

Conflict mediation and settlement

Given that OSS staff may be exposed to various situations in which mediation is necessary to seek consensus, especially when we are preparing to promote an energy community, the following are some tips for effective conflict resolution.

As a mediator, we will find that when presenting ideas or making proposals in communities, the social fabric that exists at the outset may be complex, and there may also be tensions created on the basis of previous problems. Conflicts arise in all organizations, and are the result of the diversity of opinions and interpersonal relationships. Failing to address them or pretending they are not there can have serious consequences for the well-being of the community. All organizations have their conflicts, but community management differs in the way and willingness to deal with them.

"The goal is not to have no conflicts, but to show interest in conflicts and the potential they can bring to the organization."

A cultural change is necessary, adopting a commitment to the creation of spaces and the provision of tools and resources to be able to deal with conflicts in the daily life of the group. Key aspects in conflict management:

- Create spaces for conflict management at least three or four times a year, where everyone feels the opportunity to express their opinion and all are valued in the same way.
- Contrast the conflict itself with the personal and communal vision of all members of the community.

- Design a good governance system to prevent conflicts and promote transparency in the organization.
- Emphasize knowing our roles and the power dynamics in the community, and act where appropriate to reduce inequalities.
- Recognize that there are several axes of privilege-oppression (machismo, racism, classism, LGBTIphobia) that have direct consequences on the management of conflicts.

Participatory processes

Another process that can be useful to us in addressing these casuistries is participatory processes. It is important to build a joint ideology to focus on commonalities rather than differences. Here we should talk about what our objectives are as a community.

We can propose to solve the following questions:

Where do we want to go?
What principles and values drive us?
How do we make everyone feel integrated and welcome?
What are our objectives for this year?

We must state why we do participatory processes and remember the objectives that unite us as a community. If we really want the community to manage its activities democratically, we must emphasize the following pillars: transparency, inclusion and accessibility, dialogue and active listening.

Objectives of participatory processes:

- Represent the different realities of citizenship.
- Building on the diversity of opinions and identities.
- To create spaces for reflection and meeting.
- Involve citizens in decision making.
- Combating social exclusion.
- Empowering citizens.

In order for the communities to multiply, we must show ourselves as referents and guides for nearby communities that are still in the gestation phase. We must build a network: we must actively collaborate with social economy entities that want to get involved. Let us participate in the creation of a cooperative of communities, to strengthen the local community fabric and deploy the communities in the territory.

Challenges and risks of LECs

The objective of this section is to identify, describe and summarize the most common barriers faced by energy communities during the different phases of their life cycle: creation, implementation and continuity.

The main barriers identified are presented in the following table:

Table 2 Barriers and challenges of LECs. Source: COMANAGE project, Ecoserveis.

Category	Barrier
Administrative	The support programs for renewable energies do not have the right form, they are too complex, they also change often.
	Licensing procedures are cumbersome and/or time-consuming and have uncertain outcomes.
	Networking is complicated in terms of time, cost and complexity of procedures.
	Registration of the legal form is a long and complicated process, with many bureaucratic barriers and administrative requirements.
	Barriers and problems posed by the distributor: network capacity not available or refusal to disclose available capacities in general (no sharing of data on connection points).
Economic financial /	Uncertainties related to the ownership of the facilities.
	High membership fee.
	Few dominant players in the market.
	Difficulty in accessing financial capital due to the lack of definition of LECs.
	Banks and other financial institutions do not lend to LECs or only on unfavorable and/or insufficient terms.
	Lack of financial incentives due to energy prices that do not reflect costs.
Governance	Subsidies with complicated and slow processing, insufficient remuneration in tariffs (energy supply bills).
	Complex decision making and market power in the hands of incumbents.
Knowledge skills /	Long procedures and internal conflicts of high quorum (heterogeneity).
	Lack of knowledge, experience and awareness to organize and build an initiative and implement projects.
	Lack of intermediaries: lack of organizations or individuals to promote the exchange of best practices and information, and to cooperate with local authorities and have access to extensive networks.
	Members lack the knowledge and experience to develop more complex community energy projects.
	Lack of skills, assets and/or capabilities.
Policies	Lack of knowledge (about technology, regulation, subsidies).
	Energy prices set by the market mechanism, without correction for externalities.
	Time-consuming application for funding (especially due to lack of staff and lack of qualification).
	Fear of change or rejection of new things (risk aversion) in local politics and/or local administration.
	Lack of access to politicians and policy makers.
	Heavy bureaucracy, administration and permits.
	Lack of national strategies for the deployment of LECs, and lack of institutional political support.
	Lack of clear policies and measures for LECs in national legislation.
	Lack of incentives for distributors to connect small operators to the grid, or to do the job well and in an agile manner.
	The legal forms available make it difficult for municipalities to participate in the CELs.

Regulatory legal /	Unclear or problematic legal framework.
	Lack of a clear definition of "LEC". Currently has no legal form.
	Lack of time.
Social	Limited available land in more remote areas (e.g., islands) and land use conflicts (e.g., agriculture and tourism).
	Low disposable income.
	Resistance or opposition to renewables in the territory.
	Saturation effects: behavioral factors of certain individuals or groups could slow down and impede the development of renewable energies and/or LECs. Lack of expert knowledge, together with saturation effects, can be decisive factors.
	Lack of understanding of the potential roles of energy communities.
	Lack of knowledge and confidence.
	Lack of experience in collective / cooperative action.
	LECs predominate mainly in higher income countries/regions.
	Low environmental awareness, conflict between biodiversity protection and renewable energy development.
	Lack of confidence in the actors/processes.
	Access to data.
Technological	Lack of intelligent monitoring and data management systems

6. Communication and protocols with stakeholders

This chapter aims to respond to different aspects related to the coordination of the OSSs with other local entities, a key point when defining procedures and thus streamlining the attention to people and the effectiveness of the procedures; and, on the other hand, the external communication that will have to be made from the OSSs oriented to recruitment, so that the population knows about them and uses them.

Internal communication

It is recommended that the service offered by the OSSs be coordinated with other local agents for more effective and agile case management. For this, internal communication protocols must be put in place. Some examples are presented below:

- **Coordination with Social Services:** OSS can offer technical support to local social services for the management of users' energy supplies or look for ways to include the most vulnerable profiles in collective initiatives, as these are profiles that are often underrepresented.
- **With entities of the territory:** social, cultural, educational and community **entities**, both to make the OSS known and to access the local associative and cooperative fabric and take advantage of its capacity to bring together the local population. On the other hand, synergies or joint projects can be explored with the entities.
- **Commercialization and/or distribution companies:** establish communication channels or protocols to facilitate and expedite the management of projects promoted by the LECs.
- **Housing Department:** for the management of housing and rehabilitation aid, and social mediation in cases where necessary. Also to explore the potential for cooperation between social rental housing, facilities and other public buildings towards citizens for the creation of energy communities. Jointly promote actions and measures to ensure the sustainability and eco-efficiency of the housing stock (built and newly built).

External communication

The general public's perspective and participation in the energy sector is poor in perspective and non-existent in participation. The OSS has critical role in satisfying the demand for outreach initiatives aimed at empowering citizens and encouraging their active participation in energy communities. Because it is so basic, we have broken it down into the key factors to consider to win this challenge:

1. **Awareness and Education:** It is critical to provide accessible and simple-to-understand information on energy and its numerous features to combat the perception of complexity. Outreach initiatives should focus on educating the public about energy sources, consumption habits, and the environmental and financial consequences of their choices. Workshops, internet resources, and community activities can all help with this.
2. **Participation with varied Communities:** Energy outreach activities should be inclusive and consider the needs and interests of varied communities, such as migrants and women with dependents. Customizing communication and engagement techniques for specific areas can help bridge the gap and increase access to energy-related information and opportunities.
3. **Partnerships and Collaborations:** Work with local organizations, community leaders, and advocacy groups with ties to different populations. These collaborations can aid in reaching a larger audience and establishing trust.
4. **Incentives and Advantages:** Highlight the advantages of being a member of an energy community, such as cost savings, environmental impact, and community resilience. Explain how individuals and communities can profit from active participation in the energy sector.
5. **Simplify involvement:** Make involvement in energy communities simple and not unduly burdensome. Simplify the process of joining and participating to these groups, and offer guidance and support as needed.
6. **Language and Cultural Factors:** Recognize that linguistic and cultural differences can be impediments to understanding and participation. Provide products and information in linguistically and culturally appropriate formats.
7. **Encourage Gender Equality:** Encourage women to take active roles in energy communities and in leadership positions. Create mentorship programs and efforts that encourage women to participate actively in defining energy policies and practices.
8. **Policy Assistance:** In the energy community, advocate for policies that promote inclusivity and diversity. Incentives for initiatives that emphasize underrepresented populations or quotas for representation in decision-making bodies could be examples of this.
9. **Response Mechanisms:** Create feedback channels and discussion with the community to better understand their individual wants and concerns. This can aid in tailoring communication efforts and increasing the inclusiveness of energy projects.

10. Measuring Impact (see section 9 Assessment): Evaluate the impact of outreach initiatives on a regular basis to verify they are meeting their objectives and making a difference in boosting involvement and diversity in energy communities.

By applying these techniques, the service may work to make energy communities more inclusive and ensure that a greater range of people are actively involved in the energy sector, so contributing to a more sustainable and equitable energy future.

7. Local Network, systems and procedures

Before starting up the OSS, it is important to define the network and procedures it will use. For example, the service can coordinate with other services of the municipality to refer users from services that also provide direct attention to citizens. Or with engineering or customer service departments to resolve queries from OSS staff. The aim is to coordinate the OSS with existing services to reinforce each other and create synergies between them.

In addition, service and service implementation procedures must be created to optimize the management of the office. For example, it will be necessary to define the procedures to carry out the administrative procedures that the OSS offers to the citizens, such as support in the preparation of the energy community statutes, procedures for technical, legal and financial support, etc.

These networks and services will be specific in each case, and may vary greatly from one country to another and from one municipality to another depending on the specific services that may be offered.

8. Training of OSS personnel

For the implementation of the OSS, it is also necessary to provide training with basic information so that workers have a solid knowledge base in the field of energy in general. Ideally, it is best to conduct classroom training and at the same time have a reference manual that can be consulted when needed. We recommend that training should include content in the following areas:

- Energy market
- Energy habits in the home
- Management of domestic energy supplies
- Rehabilitation
- Renewable generation and self-consumption
- Energy communities

Here it will be necessary to adapt the training to each local or state context and its legal framework. Regarding the part of energy communities in particular, it is important to provide knowledge on business models, financing strategies and possible legal forms in each context, as well as knowledge of the technical regulations for rehabilitation and generation projects in order to be able to accompany the projects that arise.

9. Impact assessment

The evaluation of the OSS's impact is a key instrument to ensure its proper functioning, as well as to detect the points where it is necessary to make proposals for improvement and also to identify the concerns of the public and be able to act on the results obtained.

To evaluate the impact of the service, it is proposed to divide the annual impact indicators of the program into three areas:

- **Social impact**
- **Economic impact**
- **Environmental impact**

Below, we list a series of indicators as a proposal, which may be relevant to measure the effectiveness and report the service provided to citizens. These indicators should be collected by each of the people working in the service and then a detailed analysis should be made in an annual report (at least) that serves to assess possible measures to be applied in the following year.

Based on these suggestions, each OSS can generate its own tools to collect data and indicators to evaluate the impact of the service offered.

Social impact indicators

To estimate the annual social impact of the program's deployment in the municipalities, the following indicators are proposed, which will have to be adapted according to the specific services offered by the OSS:

Number of households served by the program

Number of homes in the municipality that have made use of the program.

Number of visits

If visits are made to the home to assess its energy status or potential for action, home visits can be counted and segregated by type of home.

Number of media appearances (Diffusion, optional)

Appearances in different media (written, visual and/or audio) will be counted, such as magazines, newspapers, blogs, news, radio programs and podcasts, face-to-face events, neighborhood associations, social media posts, etc.

Number of homes advised

This indicator shows how many of the homes contacted receive personalized counseling.

Number of contractual actions carried out

In cases in which the OSS can also carry out procedures on behalf of the citizens, the procedures carried out for the electricity, gas and/or water supply of the neighbors will be counted (for

example, power changes, social bonus procedures, or elimination of extra maintenance services).

Number of efficiency or renewable projects

Number of energy improvement projects carried out with the support of the service. This indicator will include energy rehabilitation projects and new renewable energy installations.

Number of inhabitants impacted by counseling

Total number of citizens who have benefited from the advice offered by the program using this service. This is calculated by multiplying the number of households counseled by the average number of persons per household, or by asking each person counseled the number of persons living in the household, to obtain a more precise indicator.

Number of inhabitants impacted by project

Total number of citizens impacted by the projects. To calculate it, the number of households where a project has been carried out is multiplied by the number of people in each household.

In addition to these indicators, it can be very interesting to develop socioeconomic profiles of the people who use the services of the OSS. In this way, the communication and dissemination of the office can be focused to reinforce the use of existing groups or to encourage other groups to use it. Users could be segregated by gender, age, income bracket, whether they have a disability or physical or mental limitation, nationality, etc.

Economic impact indicators

The following indicators are proposed to calculate the annual economic impact (savings and benefits) reflected by the families advised/informed:

Annual amount of investment mobilized (€€€)

This indicator shows the expected investment mobilized in energy efficiency actions and/or renewable energy installations through the program in the municipality.

Expected savings through invoice optimization

Estimate of the annual savings in the utility bills of the residents advised as a result of the tariff modifications.

Number of grants awarded

The number of projects to which a subsidy has been granted when the OSS has participated in their processing or has advised users in their processing, as well as the amount granted to each one, will be recorded.

Environmental impact indicators

The following indicators are proposed to calculate the annual environmental impact:

Energy savings from energy efficiency projects (MWh/year)

Reduction of energy demand/consumption due to the reforms and projects carried out with the support of the service.

CO emissions reduction₂ (tons CO₂ /year)

Reduction of CO emissions₂ as a result of the projects and the advice given to families through the service. To make the calculation, it is only necessary to convert the previous indicator to CO₂ with a coefficient. Emissions data for the electricity mix are usually available from the Transmission System Operator (TSO) in each country.

Conclusion

Energy communities play a crucial role in the transition towards a more sustainable and equitable energy future. One-Stop-Shop (OSS) offices can play a pivotal role in promoting and supporting the development of energy communities. By providing comprehensive guidance and support on various aspects of energy management, OSS offices can empower citizens to take control of their energy needs and build a more sustainable and resilient energy future.

Our document covered and detailed some key recommendations for the successful implementation of OSS offices:

Establish clear and concise objectives: It is important to clearly define the goals and objectives of the OSS office in order to ensure that its resources are allocated effectively. The primary objective of OSS offices should be to promote and support the development of energy communities. However, it is also important to acknowledge that the path to fostering collective organization begins with empowering individuals in the realm of energy. Therefore, OSS offices should also provide individualized advice and guidance.

Develop a comprehensive service catalog: The OSS office should offer a wide range of services to meet the needs of different stakeholders. This may include services such as energy audits, financial advice, and technical assistance.

Build partnerships and network: OSS offices should collaborate with other organizations, such as local governments, energy utilities, and community groups, to leverage their resources and expertise. This will help to ensure that OSS offices can provide comprehensive and effective support to the community.

Communicate and engage with the community: OSS offices should actively communicate and engage with the community to raise awareness of their services and build trust. This can be done through a variety of channels, such as public meetings, workshops, and social media.

Monitor and evaluate performance: OSS offices must regularly monitor and evaluate their performance to ensure that they are meeting their objectives and delivering value to the community. This may involve collecting feedback from stakeholders and conducting surveys.

By following these recommendations, OSS offices can play a vital role in promoting and supporting the development of energy communities.

O. S. S.

Funded by:



Author



ECONOMIC SIZING TOOL FOR THE IMPLEMENTATION OF ONE-STOP-SHOP OFFICES

This tool serves two primary purposes. Firstly, it simplifies the estimation of human resources and the necessary hours for implementing an OSS (One Stop Shop) based on user-selected criteria. Secondly, it provides a means to visualize the anticipated impact, specifically in terms of the number of people served and the steps involved. To utilize this tool effectively, please navigate to the 'Basic_data' tab where you can specify the type of office, the desired services for your municipality, and the services to be included. Once you've inputted the required data, you can view the results on the 'Estimate' tab.

Choose your municipality	Municipality
Inhabitants	9000 hab
Surface	8.0 km2
Density	1125.0 hab/km2
Type size	
Typology density	

Type of care	% of attention
On-site	Yes 70%
Virtual	Yes 30%

Type of service	
Information	Yes
Consulting	Yes
Accompaniment	Yes

Fill in if both types of care are checked, specifying the percentage of each one.

Automatically calculated

Automatically calculated

Automatically calculated

Recuperar fórmula:

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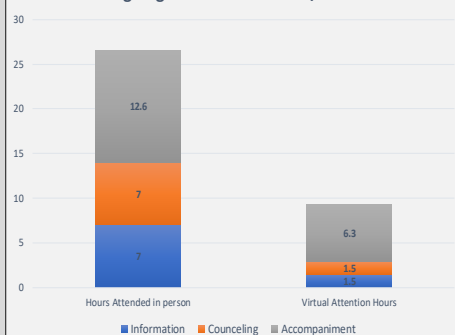
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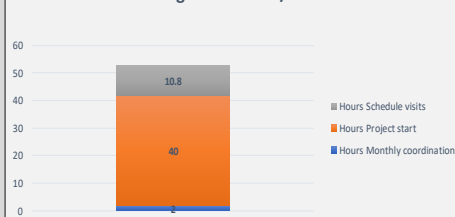
Estimate (hours)

Management	Hours Monthly coordination	2
	Hours Project start	40
	Hours Schedule visits	10.8
On-site service	Hours dedicated to face-to-face service: information	7
	Hours dedicated to face-to-face service: counseling	7
	Hours dedicated to face-to-face attention: accompanim	12.6
Virtual service	Hours dedicated to virtual attention: information	1.5
	Hours dedicated to virtual assistance: counseling	1.5
	Hours dedicated to virtual attention: accompaniment	6.3
TOTAL HOURS		88.7
Total management hours		52.8
Total hours of attention		35.9
Personnel involved to be hired		1
Number of monthly services		36
Number of people served monthly		12
Number of people served annually		144
Percentage of population served monthly		1.60%
Average dedication per person		1 h/p

ongoing maintenance hours/month



management hours/month



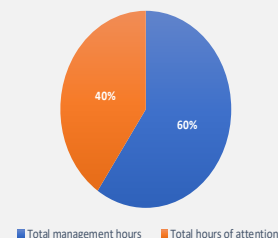
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Distribution of hours



Analysis and Guidelines of Financial and Organisational Schemes for Community Energy



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List of acronyms

CEC- Citizens Energy Community

CEP- Clean Energy Package

DCF- Discounted Cash Flows

EBRD- European Bank for Reconstruction and Development

EC- Energy Community

EE- Energy Efficiency

EPC- Energy Performance Contract

ESCO- Energy Services Company

EU- European Union

IRR- Internal Rate of Return

NPV- Net Present Value

NZEB- Nearly Zero Energy Building

OSS- One-Stop-Shops

RE- Renewable Energy

REC- Renewable Energy Community

RES- Renewable Energy Sources

RoI- Return of Interest

TPF- Third Party Financing

1. Background and objectives

Energy communities (ECs) can be understood as a way to 'organise' collective energy actions around open, democratic participation and governance and the provision of benefits for the members or the local community, involving in this way citizens in the energy system.

The Clean Energy Package (CEP) recognises certain categories of community energy initiatives as 'energy communities' in European legislation, which can be summarised in two groups: Citizen Energy Communities (CEC) and Renewable Energy Communities (REC).

Article 2 (11) of the Internal Electricity Market Directive (EU) 2019/944 defines Citizen Energy Community (CEC) as a legal entity that:

- is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises;
- has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and
- may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders.

On the other hand, Article 2 (16) of the Renewable Energy Directive (EU) 2018/2001 defines Renewable Energy Community (REC) as a legal entity:

- which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity;
- the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities;
- the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits.

While the primary purpose of both CECs and RECs is the same, RECs can be considered, to some extent, as a subset of CECs however there are some differences between them:

- RECs have a narrower geographical scope than CECs.
- SMEs can effectively control a REC, while this is limited to small and micro enterprises in the case of CECs.
- There is a stronger obligation for Member States to promote the development of RECs, not just provide a level playing field (contrasted with CECs).
- Member States are also required to take RECs into account when designing their national renewable energy support schemes.
- In exchange for these additional benefits, the eligibility requirements for qualifying as a REC are more restrictive.

The analysis and guidelines presented in this document draws from the evidence and information gathered within the UP-STAIRS project about existing financial models applied by different community energy OSS across Europe.

The objectives of the analysis were:

- To establish criteria to be assessed regarding collective financial schemes classification;
- To outline the main steps to be taken when establishing the OSS reading financial framework;
- To provide information on the different possibilities of organisational forms for existing and future energy communities.

These lessons learned, regarding financial schemes for collective action, can be used for future community energy OSS, that aim to replicate or to expand what has been done in UP-STAIRS in new regions or jurisdictions.

Furthermore, the document will provide some basic concepts on economic appraisal techniques, in order to provide a generic approach to assessing the financial viability of an energy efficiency or RES community project.

2. Methodology

In order to support identification of the most appropriate financial schemes for collective action initiatives in OSS, the procedure has been divided into three different steps:

1. Determination of the main criteria to be taken into account when selecting financing options.
2. Review of local context related to financial mechanisms and advice.
3. Matching the financing options criteria with the local context.

3. Criteria selection

3.1. Criterion 1: OSS objective - EE in buildings or RE in buildings

The main OSS objective, that is either energy efficiency measures or the deployment of renewable energy technologies, has an impact on the financial mechanism(s) that could/should be used, either on their own or in combination as explained below:

- Housing owner financing. This is the simplest method and relevant to both types of OSS, in which only the house owner provides the money to carry out the project.
- Third-party funding (TPF) and Energy performance contracting (EPC). Relevant to EE in buildings. This method can be applicable when owners do not have their own money to invest or comply with bank requirements or grant programmes, which sometimes is difficult to fulfil. In this way, the technical risk is transferred to an ESCO, who should have more financial capability to support the development. It should be noted, that in some instances, the ESCO may not be able to fully deliver the anticipated energy and economic savings and instead potentially providing improved comfort to the home owners at the same energy consumption which is a financial risk for the ESCO;
- On-tax funding. Relevant to EE in buildings. This method is applied by national or regional authorities with certain legislative power on tax legislation to stimulate energy refurbishments

of private households. In most cases it is not within the power of the local authorities creating the OSS, who can only benefit from it if it is already in place.

- Crowdfunding. Applicable both to EE and RE in buildings. This method is of special interest for energy community projects with several good examples across Europe (e.g. RESCoop, Mecise or Oleada Solar). Again, it is very much dependent on the existing legal framework in the country for citizens' cooperatives. However, it is expected to gain momentum with the gradual harmonisation of countries' legal frameworks with the European one and, more specifically, with Directive (EU) 2019/944 on common rules for the internal market for electricity, which provides the legal foundations for distributed energy technologies and consumer empowerment.
- Grants/feed-in tariffs. Applicable both to EE and RE in buildings. Extensively applied so far with proven results. Nonetheless, it is important to take into account that public money will not be enough to refurbish all of the building stock throughout Europe. For this reason, efforts have been made to maintain progress towards sustainable business models for EE improvements and RE installations, in order to attract private capital through different financing schemes.

3.2. Criterion 2: Implementation method used

This method is related to the type of funding and the distribution of technical and financial risk between the project owners/households and the financiers. Within the method, there are two different options:

- Separate contracting. The funding can be own funding, bank loan or grant, and the risk is born mainly by the project owners/households;
- Energy performance contracting (EPC). The funding is provided by the ESCO who bears the technical and financial risks of the implementation of energy refurbishment measures.

3.3. Criterion 3: Single family or multi-family buildings

The main difference between the energy refurbishment of single-family houses and multi-family buildings are, in the case of the latter, the challenges related to the multiple ownership and the need to persuade many households and co-owners to form an energy community and to implement energy renovation and RES to the entire building.

The most significant consideration related to the financial mechanism is that funding bodies usually require one single counterpart to negotiate with, so in case of multi-family buildings, there is a need to establish a legal body representing all co-owners for the financial institutions and other relevant authorities to engage with if one does not already exist.

3.4. Criterion 4: Targeted level of ambition

This criterion refers to the percentage of savings targeted with the financial scheme that the OSS will look to implement. It is relevant to OSSs for EE in buildings. It can range from a 30 % reduction of energy consumption, 60 % reduction, 75 % reduction to Nearly Zero Energy Building (NZEB).

3.5. Criterion 5: OSS incorporate a funding vehicle or rely on external funding

This criterion is closely related to the degree of financial support services offered by OSS:

- If the OSS incorporate a funding vehicle, it usually provides also cost and Return on Investment (RoI) calculations.
- If the OSS does not incorporate a funding vehicle and does not have partnerships with specific funding institutions, usually the assistance for households is limited to information on different options available for funding and on their requirements and conditions. Furthermore, assistance in administrative procedures to apply and receive the funding is also usually provided.

4. Economic Appraisal Techniques

Economic appraisal is the process whereby a range of investment projects are evaluated and ranked according to measures of financial return. These measures allow the project owner and its investors and lenders to use a common set of values to make financial comparisons between different projects. It should be borne in mind however that the project benefits assessed as part of these appraisal techniques focus on the financial aspects only and non-financial benefits are not considered which is a limitation of the approach.

Thus, in order to give funding, financing institutions require the project to undergo economic appraisal according to commonly accepted methodology by commercial banks. The methodology presented here is based on European Bank for Reconstruction and Development (EBRD) guidelines applicable to local commercial banks operating credit lines for energy efficiency improvements and RES projects on behalf of EBRD or other big international financing institutions like European Investment Bank, etc.

In this way, the aims of economic appraisal techniques are:

- To determine which investments make the best use of money;
- To ensure optimum benefits from each of these investments;
- To minimise risk to the project owners and financiers; and
- To provide a basis for the subsequent analysis of the performance of each investment.

Nonetheless, economic appraisal is not an absolute measurement of quality of an investment project; it is always relative to the whole range of possible projects open to the project owner. Therefore, the main functions of the appraisal process can be summarised as follows:

- It allows for different people with different backgrounds and self-interests to agree on a ranking of the range of possible projects;
- It gives to project owners an indication on the “bankability” of a project, i.e. on its chances to be financed by banks (where banks do their own assessments).

The economic feasibility or profitability of a project is determined by the difference between project costs and project benefits, this is the cost/benefit ratio. The project benefits result from reduced energy consumption of the company and/or from avoiding energy purchases and costs through own production from RES. On the other hand, the project costs depend on the following factors:

- Capital costs and depreciation.
- Energy and fuel costs: gas, oil and electricity.
- Operating costs: maintenance, materials, labour, service utilities, storage, handling, etc.

The following sections present the most common criteria and methods to evaluate the profitability of this kind of projects.

4.1. Simple payback

The first step in any investment appraisal is to gather the appropriate information on the project costs and benefits and calculate the cash flow generated by that project. In the simplest terms, the cash flow is the difference between the money coming in and the money going out of the investment project.

Additionally, the payback can be defined as the period of time required for the reduced fuel consumption and/or fuel costs savings to cover the initial capital costs of the project. It is called “investment pay-back period” and it is calculated as indicated below:

- $\text{Payback} = \text{Capital Cost} / \text{Annual Savings}$

The advantages and disadvantages of the simple payback method have been summarised in the following table:

Advantages	Disadvantages
Easy to calculate	Does not account for the time value of money
Interpreted in tangible terms, i.e., years	Does not indicate a rate of return on the money invested
No requirement for assumptions about the project in terms of timing, lifetime or interest rates	No account of the residual value in the capital asset: investment salvage value
It favours projects with a short payback time, which reduces the uncertainty of calculating savings for periods a long time in the future. The effects of changing technology and fuel prices are reduced	No account of any cash flows after the payback period (cut-off date) and therefore does not assess the overall value of the project

4.2 Discounted Cash-Flows (DCF)

A basic principle of finance is that money has time value: a certain amount of money in hand today (cash) is always worth more than an equivalent amount of money a year from now. In other words, the bank should be able to charge a market related price for the use of its money.

Thus, the interest rate is defined as the main charge for the use of the lender’s money stated as a percentage rate.

The Discounted Cash-Flows (DCF) methods take into account the time value of money and are based on interest rates. There are two main DCF methods, mutually connected:

- Net Present Value Method (NPV)
- Internal Rate of Return Method (IRR)

The Net Present Value (NPV) method is about calculating the present value of all yearly capital costs and net savings throughout the life of a project. By summing all the present values (costs are

represented as negative amounts and net savings as positive), a total will be obtained which is called the NPV of the project. NPV is calculated by:

1. Forecasting all cash flows generated by the investment projects;
2. Discounting these cash-flows with the appropriate opportunity cost of capital. The expected future cash flows are discounted by the rate of return offered by comparable investment alternatives. This rate of return is often referred to as the discount rate, hurdle rate or opportunity cost of capital.

$$NPV = \frac{Cash\ Flow_1}{(1+r)^1} + \frac{Cash\ Flow_2}{(1+r)^2} + \frac{Cash\ Flow_n}{(1+r)^n} - Initial\ Investment$$

Where:

- Cash Flow is the sum of money spent and earned on the investment or project for a given period of time.
- n is the number of periods of time.
- r is the discount rate.

The bigger the risk involved in a project, the bigger the return expected by the investor. Therefore, interpreting the results of the NPV:

- Negative NPV: The present value of the net savings (cash inflows) generated by the project during its life-time is less than the initial capital costs (initial cash out-flow). The project should be **rejected**.
- Positive NPV: not automatically accepted but put forward for **further consideration**.

The Internal Rate of Return (IRR) can be defined as the discount rate which will make the NPV of a project equal to zero. It represents the rate that money would have to earn outside or elsewhere in the organisation to be a better investment. The higher the IRR on a project, the more economically feasible the project.

Nevertheless, there is not a direct way of calculating IRR. Its estimation is based on the DCF method and it is necessary to carry out successive approximations, either manually or by a specific software, repeating the calculation with different discount rates until the NPV is zero.

The project owners should accept any investment offering an IRR in excess of the opportunity cost of capital.

4.3 Major factors impacting economic appraisal

Apart from the methods to predict the profitability explained above, there are other relevant major factors that can impact economic appraisal on RES and energy efficiency investment projects:

- Government grants. NPVs will be improved by reducing the initial capital costs of the project.
- Taxes. Taxes can have both negative and positive impacts on economic appraisals. For example, the additional cost of tax on net savings will decrease the attractiveness of a project. On the other hand, tax incentives (e.g. tax allowances) will enhance attractiveness. It is important always to forecast the cash flows on an after-tax basis.
- Variability of energy prices. This is the most unpredictable and critical factor:
 - Low prices lead to lack of incentives in energy savings and/or RES as they decrease the economic feasibility of community energy projects.

- The higher the prices are, the bigger the profitability of community energy projects is, when other terms are kept equal.

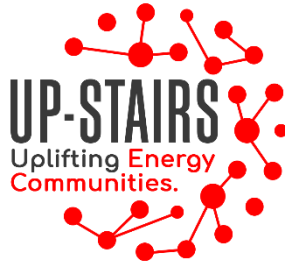
Technologies can switch the value of NPV from negative to positive because of energy prices increases.

5. Organisational forms for energy communities

Several organisational models enable citizens' participation in community energy projects. Depending on the legal form chosen, the energy communities can differ in terms of governance structure, decision-making and liabilities.

Assessing the existing energy communities across Europe nowadays, the following are the most common legal forms that can be found:

- Energy cooperatives. This is the most common and fast-growing form of energy communities. This type of ownership primarily benefits its members. It is popular in countries where renewables and community energy are relatively advanced.
- Limited partnerships. A partnership may allow individuals to distribute responsibilities and generate profits by participating in community energy. Governance is usually based on the value of each partner's share, meaning they do not always provide for a one member - one vote.
- Community trusts and foundations. Their objective is to generate social value and local development rather than benefits for individual members. Profits are used for the community as a whole, even when citizens do not have the means to invest in projects (for-the-public-good companies).
- Housing associations. Non-profit associations that can offer benefits to tenants in social housing, although they may not be directly involved in decision-making. These forms are ideal for addressing energy poverty.
- Non-profit customer-owned enterprises. Legal structures used by communities that deal with the management of independent grid networks. Ideal for community district heating networks common in countries like Denmark.
- Public-private partnerships. Local authorities can decide to enter into agreements with citizen groups and businesses in order to ensure energy provision and other benefits for a community.
- Public utility company. Public utility companies are run by municipalities, who invest in and manage the utility on behalf of taxpayers and citizens. These forms are less common, but are particularly suited for rural or isolated areas.



OSS ASEN in Energy Communities Repository

Report on SEC and ASEN activities related to
featuring of OSS ASEN

Part of Deliverable 6.6

WP6

Date of document

05/10/2023

Deliverable Version:	D6.6, V1.0
Dissemination Level:	PU
Authors:	Ivanka Pandelieva Dimova, SEC Georgi Angelov, on behalf of ASEN OSS

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1.List of Acronyms

BMF – Business Model Framework
CEC – Citizen Energy Community
EE – Energy Efficiency
EPC – Energy Performance Contracting
ESCO – Energy Service Company
ECR – Energy Community Repository
GA – Grant Agreement
HEUGO - Home Energy UpGrade Office
IC – Implementation Champions
LEC – Local Energy Community
MFB - Multifamily buildings
OSS – One-Stop-Shop
PV – Photovoltaics
RE – Renewable Energies
REC – Renewable Energy Communities
RES – Renewable Energy Sources
SEC – Sustainable Energy Communities
SFB - Single Family Buildings
SME – Small and Medium Enterprise

2. Acknowledgements

This document has been developed in the framework of the H2020 project UP-STAIRS, Grant Agreement number 92037, within WP6 “Communication, Dissemination and Exploitation activities”, as part of D6.6 “Self-training modules for citizens and potential UP-STAIRS IC”.

More information on the project can be found at <https://www.h2020-upstairs.eu/>

3.Executive summary

The document has been prepared to present the background and activities related to OSS ASEN participation in the EU Energy Communities Repository initiative. The report consists of the following parts:

- Background and objectives;
- Activities undertaken: the activities were undertaken jointly by SEC and ASEN and are as follows:
 - Interview with ECR team member for inclusion of ASEN OSS case in Guidelines document, with answers on specific questions related to OSS ASEN experience;
 - Providing additional data to ECR team: filling in the data collection form and provision of full data about the newly established energy communities of multifamily residential buildings with many individual homeowners assisted by OSS ASEN;
 - Review and provision of comments and revisions on the description of case-study of Asenovgrad Municipality OSS included in ECR Guidelines document (draft version);
 - Discussion with ECR team member about intervention of OSS ASEN at the planned webinar “Setting up Community Energy One-Stop-Shops” aiming at promotion of the initiative and the ECR Guidelines document among EU wide audience;
 - Participation with presentation in webinar “Setting up Community Energy One-Stop-Shops”.

4. Background and Objectives

The activities described in the present report, are related to wider EU level promotion of ASEN OSS pilot through inclusion in the Energy Communities Repository initiative. The Energy Communities Repository (ECR) is an initiative on behalf of the European Commission to assist local actors (including citizens, local authorities, and businesses) with setting up and advancing clean energy projects driven by energy communities in urban areas across Europe. The main objective is to contribute to enabling a just transition to climate neutrality that allows citizens to take ownership of energy consumption and production, through making available OSS ASEN practical experience and lessons learnt throughout its operation, as well as the results and benefits for the citizens.

5.Activities

5.1 Interview with ECR team member related to OSS ASEN experience for inclusion in the ECR Guidelines document

SEC and ASEN were contacted by ECR team and agreed to hold an online interview focused on OSS ASEN case – activities, experience and lessons, with the main aim to be included in the ECR Guidelines document and be used by other stakeholders all around Europe who wish to set up similar structure. The interview was held with Ivanka Pandelieva-Dimova (SEC) on 31 July 2023, and during it detailed answers were given on the following questions:

1. What is the status of your OSS?
2. When and how did your activities start?
3. What activities do you offer?
4. How does your support look in practice (i.e. the journey of an energy community through your system)?
5. How long did it take you from starting the set-up to being operational / offering your first service?
 - What were the steps you had to take to get there?
 - What were the main challenges / how did you overcome them?
6. What is your business model / how do you finance your activities?
7. What were the main factors that contributed to the success of your One-Stop-Shop? Looking at the following elements:
 - Financing / "business model"
 - Engagement / communications
 - Support from the public authorities (yes/no, which level, which form...)

- Cooperation with other stakeholders (there are for instance OSS for energy renovation in some regions or energy info-points): is the OSS a stand-alone structure or is it branching out from another existing "infopoint/OSS" structure?
8. What advice would you give to organizations aiming to set up a one-stop-shop?
- organization
 - financing
 - expertise
 - communications
9. How are you organized internally?
10. How many energy communities have you provided assistance to so far?

The answers were recorded by ECR team member and were compiled for inclusion in the ECR Guidelines Document to be prepared.

5.2. Providing additional data to ECR team

After holding the interview, OSS ASEN UP-STAIRS team was contacted by ECR with the request to contribute to the EU-wide map of energy communities being prepared within ECR Guidelines. For this purpose, a data collection survey form was filled and send back and also a list of full addresses of the newly established energy communities of multifamily residential buildings with many individual homeowners, assisted by ASEN OSS, was prepared in xls format and sent to ECR team.

5.3 Review and provision of comments and revisions about OSS ASEN in ECR Guidelines document

After the first draft of the ECR Guidelines were compiled, it was sent to SEC and ASEN for review and feedback, which was completed and the document with the feedback, accompanied with pictures, was sent back in the beginning of September 2023. OSS ASEN case is one of the 8 case-studies featured in the guidance

document, and its presentation includes all relevant aspects of OSS creation and operation. More specifically ASEN OSS is featured in the draft ECR Guidance document, as follows:

- p.3 (box about Asenovgrad)
- pp.21-22 (example box about EU-level funding)
- pp.23-24 (case study box)
- pp.27-29 (example box about partnerships)
- p.33 (example box about impact monitoring)

According to information from ECR team, the ECR Guidelines document (where all relevant information about OSS ASEN will be accessible) will be available at ECR web-site [Energy Communities Repository - About \(europa.eu\)](https://ecr.europa.eu/energy-communities-repository/about) by the end of October 2023.

5.4. Discussion with ECR team member about intervention of OSS ASEN at the planned webinar “Setting up Community Energy One-Stop-Shops”

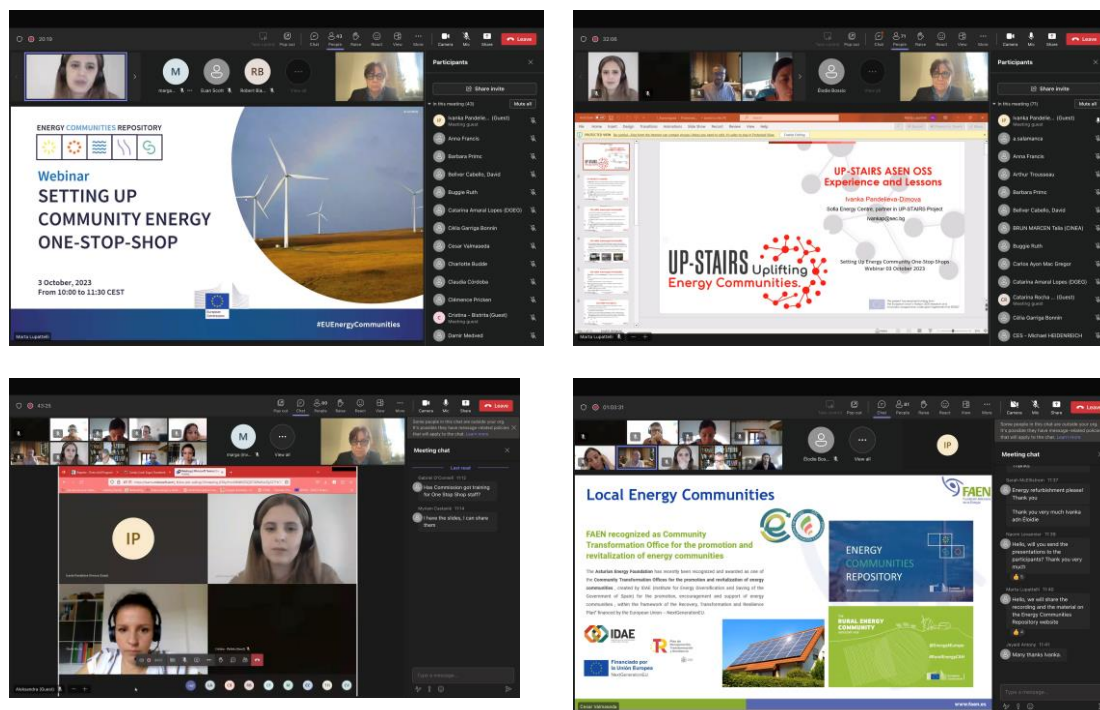
SEC and ASEN were contacted by ECR team with a proposal to make an intervention at the planned webinar “Setting up Community Energy One-Stop-Shops”, aiming at promotion of the initiative and the ECR Guidelines document among EU wide audience. SEC and ASEN agreed to present firsthand experience of setting up and operation of ASEN OSS. In this relation, an online discussion was held with ECR team member on 25 September 2023.

5.5. Participation with presentation in webinar “Setting up Community Energy One-Stop-Shops”

The webinar “Setting up Community Energy One-Stop-Shops” was held online on 03 October 2023 where ASEN OSS case was presented by Mrs. Ivanka Pandelieva-Dimova. The event was attended by 81 participants, there were three presentation of case-studies, each one followed by a Q&A session. The presentation of ASEN OSS was followed by a Q&A session when there were questions

by the audience, among which was the questions about training of OSS ASEN staff, about OSS ASEN strategy to cope with mistrust of homeowners, and also about availability of funding for energy refurbishments.

Following are some screenshots from the webinar:



Full recording of the webinar together with the presentations will be available at the site of the ECR at:

[Energy Communities Repository - About \(europa.eu\)](https://ecr.europa.eu)

6. Enclosures

Attached to the present report are:

1. Agenda of the Webinar “Setting up Community Energy One-Stop-Shops”;
2. OSS ASEN ppt presentation;
3. List of full addresses of the newly established energy communities of multifamily residential buildings, assisted by OSS ASEN.

SETTING UP COMMUNITY ENERGY ONE-STOP-SHOPS

October 3rd, 2023

From 10:00 to 11:30

[Link to Webinar](#)

[Add this event to your calendar](#)

In this upcoming webinar, we will introduce tailored information for those looking to establish a one-stop-shop for energy communities, as contained in the forthcoming guidance document from the ECR. The content of the webinar has been developed through a combination of insights gathered from established one-stop-shops across various EU countries, an in-depth analysis of relevant literature, and the lessons learned from dedicated projects in this field.

The webinar offers a source of inspiration and knowledge for those considering the creation of energy community one-stop-shops. We will draw from real-world examples and past initiatives, offering practical instances and utilizing the expertise gained from previous endeavors.

Furthermore, the webinar will showcase three speakers who represent one-stop-shops. They will share their firsthand experience, providing you the opportunity to engage directly with them. This interactive session promises informative discussions, the chance to ask questions, and the valuable opportunity to networking.

Time	Presentation	Speaker	Duration
10:00	<i>Agenda presentation and introduction of the guidance document</i>	Marta Lupattelli	10 minutes
10:10	<i>Asenovgrad: firsthand experience</i>	Ivanka Pandelieva-Dimova	20 minutes
	<i>Q&A session</i>		5 minutes
10:35	<i>Fundación Asturiana de la Energía (FAEN): firsthand experience</i>	Cesar Valmaseda	20 minutes
	<i>Q&A session</i>		5 minutes
11:00	<i>Sustainable Energy Authority of Ireland (SEAI): firsthand experience</i>	Ruth Buggie	20 minutes
	<i>Q&A session</i>		5 minutes
11:25	<i>Wrap up and conclusion</i>	Marta Lupattelli	5 minutes

UP-STAIRS ASEN OSS Experience and Lessons

Ivanka Pandelieva-Dimova

Sofia Energy Centre, partner in UP-STAIRS Project

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Setting Up Energy Community One-Stop-Shops
Webinar 03 October 2023

UP-STAIRS *Uplifting*
Energy Communities.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

UP-STAIRS in a nutshell

- ❖ **Main aim:** Creation of One-Stop-Shops (OSSs) to facilitate establishment of energy communities and help citizens participate in energy transition;
- ❖ Financed by EU H2020 Programme, from 1 September 2020 till 30 November 2023;
- ❖ 10 partners from 7 EC countries;
- ❖ **4 OSSs** in 4 pilot regions were created and operated – Upper Austria (Austria), Asenovgrad Municipality (Bulgaria), Cork City (Ireland) and Barcelona Metropolitan Area (Spain)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Setting Up Energy Community One-Stop Shops
Webinar 03 October 2023



OSS ASEN, Asenovgrad Municipality

- ❖ OSS ASEN created and operational from 1 July 2022;
- ❖ Physical premises at municipality building;
- ❖ Staffed with 5 municipal employees appointed by the Mayor according to their experience;
- ❖ Different profiles of experts – 2 economists, 2 technical experts and a lawyer;
- ❖ 1.5 years of preparatory work: initial conceptualization, adjusting to local circumstances, establishing an organizational structure within the OSS that encompassed financial, administrative, and technical functions.



OSS ASEN, Asenovgrad Municipality

- ❖ Before starting operation, OSS ASEN staff trained in various aspects related to provided services: technical aspects of EE and RE in buildings, economic appraisal basics, EU and national legislative framework, funding possibilities available or home owners, etc.
- ❖ One-day training, 23 June 2022, in Asenovgrad municipal meeting hall;
- ❖ Training modules jointly developed within UP-STAIRS project, delivered by SEC



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

**Setting Up Energy Community One-Stop Shops
Webinar 03 October 2023**



OSS ASEN, Asenovgrad Municipality

Main focus – individual **homeowners** in multifamily residential buildings

Why:

- ❖ A lot of buildings in the municipality are private multi-family residential buildings;
- ❖ Mainly prefab panel type or cast concrete type;
- ❖ Many individual owners who need to establish energy community to renovate the entire buildings;
- ❖ Citizens would like to save money and energy, but they do not know where to start and how to proceed;
- ❖ This is where ASEN OSS come into action



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Setting Up Energy Community One-Stop Shops
Webinar 03 October 2023



OSS ASEN Concept (1)

- ❖ Facilitates homeowners to establish owners' associations to act as Citizen Energy Communities (CEC);
- ❖ Emphasizes the importance of implementing energy efficiency measures throughout the entire building;
- ❖ Aligns its focus with the potential integration of RES in buildings (solar panels and/or biomass-fueled boilers) although the respective legislation for the establishment of Renewable Energy Communities is still missing in Bulgaria (draft at Parliament, expected by the end of 2023).



OSS ASEN Concept (2)

- ❖ Services offered on site in physical premises in municipality building, by phone and by email;
- ❖ Focus on creation of energy community for the entire building – Association of Owners (AO);
- ❖ Focus on EE and on installation of RES;
- ❖ Assistance for application for funding of EE and RE measures from different available sources – national and European;
- ❖ Complex service offered- citizens and representatives of AO are “taken by hand” and are assisted during the entire cycle of the building energy renovation process.



OSS ASEN Services

Aspects of energy refurbishment covered:

- Organizational – supporting the emerging energy communities and strengthening them through the process of organization; support during the process of the legal body creation; providing and filling the necessary administrative documentation;
- Administrative – procedures to follow and forms to fill-in;
- Legal – information on the creation of owners' association; verifying the submitted documents; acceptance of an application for participation in the procedure; verification of the documentation presented by the association; carrying out public tenders regarding the selection of contractors on behalf of the Association of Owners
- Technical – steps leading to the implementation of collective actions; understanding the technical and economic information of the energy audit; selection of contractors; performing investor's control,
- Financial – support and review of the documents for funding; launching public procurement of energy service and refurbishment works of the building; undertaking financial reporting and control
- Facilitation & mediation – mediation between citizens and contractors



OSS ASEN Results

- ❖ **People assisted:** **7 309** people received consultation and advice from OSS ASEN (69 buildings with 2 420 dwellings);
- ❖ **27 new energy communities created;**
- ❖ Expected **primary energy savings:** **9.6** GWh/annum;
- ❖ Expected **building area to be refurbished:** **227 374** sq m of buildings that received assistance and advice;
- ❖ Expected **investments:** **13.5** MEuro



OSS ASEN lessons (1)

- ❖ **EU funding support** needed to establish and operate, at least in the beginning- results proved it useful, decision to **prolong at least for 1,5 years** after project end;
- ❖ **Political commitment** from the municipal council is **crucial**;
- ❖ An asset: **staff members are public servants** who are impartial and understand the internal processes;
- ❖ **Difficult to persuade** homeowners (skeptical about the support) – a lot of **communication and mediation work needed**, gained momentum through **“word of mouth”** after the first results emerged.



OSS ASEN lessons (2)

- ❖ Identified significant share of **people at risk** of energy poverty (female and male over 50, own their apartments from socialist times, low income or unemployed, socially vulnerable) who cannot afford to cover their share of costs - **availability** of national/regional **funding support programmes** for EE and RE is **crucial**;
- ❖ Owners **motivated to take action** by cost savings and improved comfort but **lack knowledge** how to proceed – need to be **“taken by hand” from start to end** of the process.



For more information:

<https://www.h2020-upstairs.eu/>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

**Setting Up Energy Community One-Stop Shops
Webinar 03 October 2023**



Thank you for your attention!

Ivanka Pandelieva-Dimova (SEC)
Georgi Angelov (on behalf of ASEN OSS)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Setting Up Energy Community One-Stop Shops
Webinar 03 October 2023



№	Country	Region	Municipality	Town	Address
1	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 2 "Loznitsa" Str., apartment building "Vazhod"
2	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 6 "Zhelezarska" Str. residential area "Zapad", № 7 "Loznitsa" Str., apartment building № 110, entrance A and B
3	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 8 "Stoyan Djansazov" Str., apartment building № 101, entrance A, B and V
4	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 6 "Georgi Angelov" Str.
5	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 1 "Vasil Levski" Str.
6	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 2 "3-ti mart" Str.
7	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 20 "Ilinden" Str.
8	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 1 "Loznitsa" Str., apartment building "Detelina"
9	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 2, 4, 6, 8, 10 "Rechna" Str.
10	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Iztoc", apartment building № 8
11	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area „Iztoc“, apartment building № 7
12	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 65 "Bulgaria" bul.
13	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 9 "Stoyan Djansazov" Str., apartment building № 103
14	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Iztoc", apartment building № 2
15	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 28, 30, 32, 34 "Shesti Yanuari" Str.
16	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 8 "Loznitsa" Str., apartment building № 6/5, entrance A, B, V
17	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 3 "Stoyan Djansazov" Str., apartment building № 106
18	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	residential area "Zapad", № 10 "Loznitsa" Str., apartment building № 7/5, entrance A, B, V
19	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	№ 27 "Rechna" Str.
20	Bulgaria	Plovdiv	Asenovgrad	Asenovgrad	