



Community Energy Action Plans

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List of Acronyms

BMF – Business Model Framework

CEC – Citizen Energy Community

EE – Energy Efficiency

EPC – Energy Performance Contracting

ESCO – Energy Service Company

GA – Grant Agreement

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

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This document has been developed in the framework of the H2020 project UPSTAIRS, Grant Agreement number 92037, within WP2 “Development of UPSTAIRS framework and methodology for collective action”, Task 2.6 “Adaptation of the UP-STAIRS One Stop Shop (OSS) Framework to the pilot contexts” and WP3 “Implementation of UP-STAIRS Energy Service OSS in 5 Pilot Regions”, Task 3.1 Setting up of the Pilot OSS and identification of training needs.”

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

Executive summary

This document has been prepared as part of the theoretical framework enabling the pilot regions to undertake the creation of OSSs, focusing on facilitation and support for the collective actions within local citizen energy communities and renewable energy communities. It describes the key elements of the planning, opening and operation of the OSSs, such as covered geographical territory, scope for services, foreseen phases and actions during each phase, potential risks and potential opportunities associated with them, as well as the time-line of the actions. The report contains the background and objectives section, the methodology description, and the contextualization of each pilot, where the specific pilot's situation regarding the above key elements is presented.

1 Background and Objectives

The main aim of the present document is to give to each of the five UPSTAIRS pilot regions the framework of the actual planning, establishment and operation of the OSSs that support the creation of energy communities on their territory.

The information in this document is based on the previously collected data from pilots, presented in the drafts of the Community Energy Action Plans (D 2.3) and obtained through the thinking process applied in WP2 “Development of UP-STAIRS Energy Service OSS Framework and Methodology for Collective Action”, Task 2.6 “Adaptation of the UP-STAIRS OSS Framework to the pilot contexts”. These pilot contributions have been analysed in detail, and developed with the data collected under WP3 “Implementation of UP-STAIRS Energy Service OSS in 5 Pilot Regions”, Task 3.1 “Setting up of the Pilot OSS and identification of training needs.”.

2 Methodology

The methodology for the creation of the Energy Community Action Plans is based on the outlines developed as part of deliverable D.2.3 and their adaptation to suit the local conditions in each of the five UPSTAIRS pilot regions.

The pilots have been the main contributors to the Energy Community Action Plans, and the necessary information has been obtained through the feedback process implemented as part of Task T2.6 and described in deliverable D2.3, but also through specific relevant questions obtained via e-mail and during general meetings of the UPSTAIRS consortium, done under Task T3.1. For completeness, SWOT analyses have been taken from deliverable D2.3 and included for some of the pilots.

The initial analysis and discussions strongly indicated that the local contexts between the different pilot regions vary significantly and in order to maximise the potential of the UPSTAIRS concept and tools, a more open and bottom-up approach to implementation and planning was required, compared to the initially planned one.

This more optimised approach necessitated the collection of additional information, such as the definition of the specific pilot site where the OSS will be deployed, i.e. the geographical/urban area to be covered, and a preliminary indication about the predominant types of measures the OSS is going to cover – energy efficiency (EE) in buildings or renewable energy (RE) in buildings.

The first question relates to the size of the population and the type and size of the buildings stock where the OSS services will be offered, and the impact they can potentially achieve. The second question pertains to the identification of the relevant technical, organisational and legal aspects of the application of the collective actions, which differ with each region. The predominant type of measure (EE or RE) also has an impact on the specific types of services and actions in each pilot, as well as on suitable financial mechanisms, strengths and risks associated with the operation of the OSS. It should also be noted that the five pilot regions intend to cover both types of measures in different variations and proportions that optimised to the local market needs.

3 Pilots' context

The pilot context is described in the context of the implementation framework elements defined in deliverable D2.3. According to this framework, the implementation timeline is divided into three main phases that represent the main milestones in the creation and operation of the OSS - these are:

- pre-service phase,
- service phase and
- post-service phase.

Within these three phases a list of possible activities has been developed and the pilots have presented their plans on which actions will be taken, and discussed the associated strength and weaknesses, possible risks and risk mitigation measures.

A more detailed description of the pilot's plans are given in the following sections.

4 City of Cork Energy Community Action Plan

4.1 Overview

Territory covered: The City of Cork intend to deploy OSS services covering the territory of the city and if successful in its establishment and operation, to extend it to the Southern Assembly Region of Ireland.

The predominant **type of measures** that the Cork OSS will cover are energy efficiency in buildings in combination with renewables (heat pumps and solar panels).

The implementation time-line is described in the following sections.

4.2 Pre-service phase

During this phase, the Cork City Council plans to ensure the necessary conditions for the successful launch of the OSS are in place. The actions they plan to undertake are as follows:

- Awareness raising among the local stakeholder.
- Service development
- Implementation Champions
- Training of Implementation champions

4.2.1 Awareness raising

To increase awareness among the local stakeholders, the Cork City Council plans to deploy:

- Press releases in the local press and radio.
- Messages in the social media.
- Promotional material about energy retrofitting of private dwellings prepared by the Energy authority.

The above actions will be implemented prior to the opening of the OSS in order to prepare the grounds for the OSS operation through spreading the right messages among the local stakeholders and potentially interested groups. In order to strengthen the activities and maximise the results, Cork City council also considered a possible engagement with a PR specialist.

4.2.2 Service development

Another type of activities that precede the launch of the OSS is related to the development of the planned services that the OSS will offer. They are classified in different groups, depending on what aspect of the OSS support they are related to. These are as follows:

- Organisational support services
- Legal Support services
- Financial support services

Organizational support services

In order to facilitate the creation of local energy communities, the Cork OSS will provide support regarding the organisational aspects. These services will include: support for connecting citizens / neighbours and getting them in touch with each other, support in setting up of the legal entity, advice for citizens on how to organise themselves, which is related to the existing legal framework, advice on aggregation of individual projects for economies of scale, and communication with providers.

Legal support services

Cork OSS plans to provide information to the customers through the development of a list of legal FAQs typical for the local legislative context related to energy communities. This list will be set up according to current legislative framework and will be constantly updated as will change during the OSS operation time.

Financial support services

Cork OSS plans to provide advice and information about sustainable energy financing options (grants, loans and tax incentives) available for the citizens and other stakeholders, as well as a list of financial institutions that are involved in financing of energy efficiency and renewable energy measures.

4.2.3 Implementation champions

During this phase, the recruitment of the Implementation Champions (ICs) will also take place, as well as their training on the relevant aspects of the OSS operation, as per the Training plan (D2.5) developed under Task 2.8 of the GA. It is planned to recruit 7 ICs who will have different profiles from the retrofitting environment. Three of them will be volunteers chosen from the community and four will be Cork City Council employees who will also act as ICs. These will be engineers and a clerical officer will be available at the front desk of the OSS. The ICs will directly support citizens through advising and

mentoring on the different aspects of energy communities and energy retrofits of their homes. The main type of services will be offered through the online platform but also a physical space will be devoted to the OSS to serve as an advisory centre.

4.2.4 Training of IC

The IC's will be trained on different relevant topics such as energy rating, building regulations, financial instruments (loans and state supports and cost-optimal investments). Moreover, the ICs will be trained on how to provide support and accompany the citizens all along the process of energy community establishment and energy efficiency and renewable measures implementation with the main duty and responsibility to offer their expertise to the customer. The main risk that has been identified at this phase is the lack of formal IC structure and the involvement of volunteers.

4.3 Service phase

The activities foreseen during this phase are related to the actual operation of the OSS, i.e. provision of the foreseen advisory services developed in the previous phase and collecting feedback about the outcomes and results from the clients.

These advisory services include:

- Legal advice
- Technical advice
- Organizational advice
- Recruitment of clients
- Retention and monitoring

4.3.1 Legal advice

Legal advice consists of answering queries on contract conditions, warranties, and payment schedule.

4.3.2 Technical advice

Provision to clients of a retroKIT software to be used to assess the technical aspects of energy efficiency measures in their homes,

4.3.3 Organizational advice

Collection of clients' data (geographical and type of investment) to facilitate energy communities' creation. Due to lack of legislation on energy communities, the citizens cannot be organized as a legal entity, which would have given them the opportunity to approach the municipality themselves. Instead, the Cork City Council plans to lead the process of creating the energy communities by grouping initiatives with similar needs, with the aid of the digital platform.

4.3.4 Recruitment of clients

The recruitment of clients will be done via the UPSTAIRS platform through sign up to the platform. During the process of advice, technical support from the energy authority will also be used.

4.3.5 Retention and monitoring

During and after the implementation of measures by the clients, they will be provided with retention and monitoring services.

4.4 Post-service phase

During this phase, follow-up services are foreseen, such as assessment of the measures and their potential impact in terms of energy saved/RE produced, investment made etc., data collection from the customers to follow-up with the retrofitting project, meetings and workshops with customers to follow the development about advice given and the level of satisfaction, as well as promotion of good examples to other potential customers.

4.5 SWOT Analysis of Community Energy Action Plan

The following SWOT analysis was taken from D2.3.

4.5.1 Strengths.

The marketing materials utilized will be complimented by materials from Irelands Energy Authority (SEAI). Guidance offered to citizens will be in line with SEAI's guidance improving the energy efficiency of the home, establishing energy communities and the engagement of project co-ordinators.

The targets set for Irelands housing stock in the national Climate Action Plan are achievable for most building typologies.

Ireland has a network of sustainable energy communities at various levels of development whose aim is to increase awareness of the need to be more efficient and sustainable in the use of energy.

Ireland has a proven track record of community formation for the sole purpose of improving the energy efficiency of the building stock owned by the community.

4.5.2 Weaknesses

The action plan is limited because all community energy delivery projects and deep energy efficiency retrofitting must be delivered through project co-ordinators.

Within the time frame of the project it will not be possible to follow through with citizens on actual measures they have implemented as a result of their engagement with the platform.

4.5.3 Opportunities

The OSS offering facilitation services will serve to fill a gap in the market. Currently there is a very significant load placed on project co-ordinators from citizens who are just enquiring about improving the energy efficiency of their home. The OSS will assist in alleviating that problem.

The OSS will provide independent advice to citizens enabling them to make informed and better decisions when they engage with project co-ordinators or decide to install individual measures to improve the energy efficiency of their home.

If successful, the OSS may be able to continue post the project with support from the retrofitting industry.

4.5.4 Threats

Both the retrofitting industry and citizens/energy communities may see the OSS offering facilitation services as an impediment to progress rather than an enabler to them achieving their goals.

The formation of area-based communities can be difficult as people have different needs and expectations. Affordability, a desire for privacy and trust are major impediments to the formation communities.

5 Barcelona Metropolitan Area (AMB) Energy Community Action Plan

5.1 Overview

Territory covered: the territory that AMB OSS will cover is the metropolitan area of Barcelona. It consists of 36 municipalities and occupies a territory of 636 km². The plan is to have one OSS in each municipality.

The predominant **type of measures** that AMB OSSs will cover are mainly PV solar panels on residential and industrial rooftops. The OSS will encourage citizens and SMEs to share their energy surplus with neighbouring homes and industries. Further to this, advice will be provided on low and no cost energy efficiency measures such as consumer behaviour. One OSS that opened in February 2022 will focus on energy efficiency measures.

The implementation time-line is described in the following sections.

5.2 Pre-service phase

During this phase, various **awareness rising actions** will be performed to make the OSS services more visible among the local stakeholders - citizens and industries.

Moreover, the services that will be provided to clients, will be developed. These include:

- Legal advice
- Financial advice
- Technical advice
- Implementation champions recruitment

5.2.1 Legal advice

Legal advisory services will be related to the support for municipalities and provision to citizen of information on cooperative business models applicable on the territory of AMB.

5.2.2 Financial advice

Financial advisory services will be related to information and advice on available funding sources for renewable energy projects such as Catalan Public Bank and crowd funding schemes, combined with information such as list of prices of respective equipment and technologies.

5.2.3 Technical advice

Technical advisory services are related to establishment of contractors' list and optional organisation of public tender on behalf of local authorities which will be decided at a later stage.

5.2.4 Implementation champions

During this phase the recruitment of the Implementation Champions (ICs) will take place, as well as their training on the relevant aspects of the OSS operation as per the Training plan (D2.5) developed under Task 2.8 of the GA. The anticipated number of ICs is 5 per municipality who will be technical staff from ABM and the own municipalities. It is also that IC volunteers that have already been recruited by cooperatives and NGOs under various other support programmes in Barcelona Metropolitan Area will participate. Those ICs will be recruited on a voluntary basis, through a low effort engagement strategy: the use of emails and meetings will be sufficient since they are already in close contacts to other AMB departments.

5.3 Service phase

This phase comprise the actual provision of services developed during the previous phase. Throughout the service phase, the AMB OSS will provide advice to the potential clients. Furthermore, AMB will collect feedback from their existing clients about the outcomes of this counselling service, as well as from their results in terms of energy savings and renewable energy production, investments needed, etc. The aforementioned advisory services provided to the customers will include the following:

- Technical advice
- Financial advice
- Legal advice
- Data collection
- Facilitation

5.3.1 Technical advice

The Spanish pilot will be advising on available technologies and how they can be introduced in the local context, and facilitation of relevant contacts with technology providers and installers.

5.3.2 Financial advice

Financial advice will include provision of the indicative overall budget, financial planning of the investment project as proposed share distribution among different financial sources (own financing, loans, subsidies) as % of the budget, and calculations of ROI by the ICs.

5.3.3 Legal advice

Legal advice will focus on the type of contracts that are legally applicable to renewable energy investment depending on the concrete financial scheme used: loans, crowd landing subsidy, etc.

5.3.4 Data collection

Data will be collected from potential users relating to all involvement with the clients. The interaction with the citizens will be done physically, in the offices of the OSSs and the final recruitment of clients will go through the UPSTAIRS digital platform where ABM OSS will interact with the clients in digital format. Also, retention and monitoring of the output of advice given will be done after the launch of digital platform through it.

5.3.5 Facilitation services

The pilot site will also offer facilitation and dissemination of RF y EMELCAT SCCL, a local cooperative for electrical storage systems: self-consumption, energy communities, renewable generation supports, energy management software and advice.

5.4 Post-service phase

No particular activities have been foreseen in this phase.

6 Upper Austria Energy Community Action Plan

6.1 Overview

Territory covered: the ESV OSS will cover the whole territory of Upper Austria region.

The predominant **type of measures** to be promoted and advised is the implementation of renewable energy sources in buildings through energy community support services.

The implementation time-line is described in the following sections.

6.2 Pre-service phase

During this phase various awareness rising actions have been performed to make the OSS services more visible among the local stakeholders, as follows:

- 1st regional meeting with “pioneers” to develop ideas;
- Information rollout: including launch of the website, preparation of promotional leaflets, etc.,
- Organisation of different local events such as the regional SEC conference on the 20.04.2021, engagement events with municipalities and SMEs, etc.

Another activity during this phase has been the identification of potential ICs and their training to perform the advisory and counselling activities of ESV OSS.

What is more, an important part of the activities carried out in the pre-service phase has been the development of services delivered to the customers through:

- Identification of key stakeholders in the region
- Learning process with “pioneer” communities and key stakeholders who are promising REC candidates,
- Collecting and summarising information about different regulatory, technical and organisational issues relevant to renewable energy communities (REC),
- Interacting with relevant authorities and providing feedback “from the ground”,
- Identification of pioneer communities to start without the theoretical framework.

6.3 Service phase

This phase consists of the provision of advice and guidance to local stakeholders about the different aspects of REC in Upper Austria such as the legal framework for REC - on the new legislation for energy communities, options for the legal set up, contents of contracts, etc. In addition, this phase also encompasses guidance on the organisational aspects of the establishment of REC, guidance on financial and funding options; technical advice on grid connection issues, balancing of supply and demand, advice on different renewable energy solutions as well as on energy efficiency options.

The different forms of the provided advice services include ongoing information rollout and interaction with the stakeholders through training and awareness raising on REC in Upper Austria on technical, regulatory, financial and organisational aspects of RECs. The interactions have been conducted through engagement events (round tables, workshops) with municipalities and SMEs and via various communication channels - phone, e-mail, video conferences, website publications, in the physical office, at the on-site energy communities, and in events.

6.4 Post-service phase

No particular activities have been foreseen in this phase.

7 Municipality of Asenovgrad Energy Community Action Plan

7.1 Overview

Territory covered: Asenovgrad (ASEN) OSS will cover the territory of the municipality.

The predominant **type of measures** will cover energy efficiency in buildings, mainly in multifamily prefabricated panel buildings combined with the introduction of renewables technologies (mainly heat pumps and solar panels).

The implementation time-line is described in the following sections.

7.2 Pre-service phase

The activities of this phase will focus on the services development that are foreseen to be provided to the clients. These services include:

- Financial advice
- Organizational advice
- Implementation Champions recruitment

7.2.1 Financial advice services

During this pre-service phase, the project team will collect information about the funding vehicle available and the terms and conditions that are applicable to the citizens to have access to the funding.

7.2.2 Organizational advice services

It is foreseen to set up a physical office in the premises of the municipality and also in the on-line website as part of the UPSTAIRS platform.

7.2.3 Appointment of Implementation Champions

During this phase, 5 ICs will be appointed. All of them will be municipal employees with different backgrounds – engineers, economists and communication/PR experts. The ICs will be trained in the most relevant identified aspects to provide the foreseen services as per the Training plan (D2.5) developed under Task 2.8 of the GA.

7.3 Service phase

During the service phase the following activities are foreseen:

- Awareness raising

- Advice and Feedback
- Recruitment
- Implementation
- Retention and monitoring.

7.3.1 Awareness raising

After ASEN OSS is set up and ready to open with the corresponding services developed and the ICs trained, awareness raising activities will take place in order to spread knowledge among citizens about the ASEN OSS and the services that will deliver among the building owners. These awareness raising activities include communication measures through the municipal website and press releases in local media, preparation and distribution of promotional materials, communication with different profile customers from homeowner communities, raising social acceptability, etc.

7.3.2 Advice and Feedback

The clients of ASEN OSS will be contacted both via physical office and on-line through the UPSTAIRS platform. During these interactions data collection will take place, including information about the size of the community, the intended measure they are considering, the questions they need advice on, etc. ASEN OSS will also facilitate the establishment of owners' associations as legal bodies through provision of advice on the essential steps that must be taken and the importance of these bodies in order to get funding for intended measures in the whole building. This aspect is important, since the target customers live in multifamily residential buildings with many different apartment owners and establishing a legal body to represent them is a prerequisite for any kind of energy refurbishment as well as for the installing of RES in the entire building.

7.3.3 Recruitment

The services related to the interaction with customers and their onboarding in the energy refurbishment and the RES deployment in their building, involve organisational assistance to the Association of Owners representative. This figure must fill the documents required for application for funding as well as offer technical support through provision of a list of energy audit companies. In addition, explanations about the audit process must be given, since it is necessary to get funded. Furthermore, legal advice services will need to be provided to the representative of Association of owners in

relation to the legal requirements of the funding vehicle - face to face in ASEN OSS premises and on-line through the UPSTAIRS platform.

7.3.4 Implementation

ASEN OSS will advise the clients throughout the implementation of energy efficiency/renewable energy measures by provision of a list of contractors to undertake the building works. The launch of a public tender for contractors on behalf of clients is being considered, nonetheless, this will be defined at a later stage depending on the requirements of the funding vehicle which at present are not known yet.

The main identified **risks** during this stage are related to the delay in the launch of the next phase of the funding vehicle (the National Programme for Energy Refurbishment of Multifamily Residential Buildings) which is currently still under preparation. Another potential risk is the situation concerning the harmonisation of Bulgarian legislative framework with the main provision of the relevant EC legislation, which is still pending and is not expected to come soon.

7.3.5 Retention and monitoring

In addition, it is foreseen to monitor and approve the construction works and to send the corresponding information to the funding banks to make necessary payments to contractors. Another service foreseen for ASEN OSS clients is to provide mediation in case of disputes between the association of owners and the contractor and try to resolve them in the best possible way for both parties involved.

7.4 Post-service phase

As follow up services, it is planned to approach the clients and review their satisfaction about performed refurbishment works and the ASEN OSS services provided to them.

8 Brunnthal Municipality Energy Community Action Plan

8.1 Overview

Territory covered: Brunnthal OSS will cover the territory of Municipality of Brunnthal, a rural area outside of Munich.

The predominant **type of measures** to be promoted and advised by Brunnthal OSS will be RES in residential buildings, especially PV-Systems and batteries. In addition, it might offer also energy efficiency in residential buildings, which would be mainly services like wall insulation, window replacement, etc.

The implementation time-line is described in the following sections.

8.2 Pre-service phase

As in the other four pilots, this phase will be used to develop the services that will be provided to Brunnthal OSS clients. The main foreseen services are grouped into:

- Organisational
- Technical

8.2.1 Organisational advice

This includes services that support the establishment of local energy communities through provision of list of potential contractors, measures to enhance the sense of community of users (e.g. through organisation of informal gatherings), collection of useful information for potential users (such as% of tax cuts);

8.2.2 Technical advice

Technical advice involves preparation of relevant content to the UPSTAIRS digital platform and ICs to be able to reply to users' questions/requests.

The main identified risk during this stage is that the EC legislation is not expected to be transposed into the local legislative framework in the next 24 months.

8.3 Service phase

After the launch of the Brunnthal OSS there are the following services that are planned to be provided to the customers:

- Advice and feedback
- Awareness raising
- Recruitment
- Implementation

8.3.1 Advice and feedback

The types of foreseen advice services are:

- Financial advice: these are consultations and information provided by ICs to potential customers about any new financing opportunities that are launched. Another example of financial advice is to explain potential barriers for funding stemming from unfavourable values of payback and return for energy efficiency and renewable energy projects.
- Organisational advice: Brunthol OSS will prepare a check list with the most important steps to be taken and things to be done in order to implement energy efficiency and renewable energy activities to help customers to overcome their possible resistance due to lack of information and knowledge on how to proceed.

8.3.2 Awareness raising

Several awareness raising activities are planned. These activities include the organisation of informal meetings within the municipality where people can gather and get educated and motivated to create energy communities. Moreover, the performance of a marketing campaign in the municipality to promote the services of the OSS and their potential benefits to the residents is also considered.

The main identified risk during this phase is related to the strongly rising hardware and labour costs that may prevent favourable ROI.

8.3.3 Recruitment

The recruitment is planned to be done via UPSTAIRS web platform and most probably as a sign-up service. During this process, user profiles will be collected and the potential project scope per household for energy efficiency and renewable energy activities will be gathered. Another activity foreseen is the preparation of materials to act as good-practice examples that can be used by the pioneers/initiators of energy efficiency/renewable energy projects towards their neighbours or peers. In this regard meetings with ICs will

be organised too in the municipal town hall, which could be either one-to-one meetings or in the form of collective events (one-to-many).

8.3.4 Implementation

Implementation activities will have the purpose of connecting the citizens/users with suppliers, to be prepared and available to answer questions and to provide support or supervision on the realisation of energy efficiency or renewable energy projects.

The most significant risk identified during this phase is related to the potential difficulties in getting suppliers to do the work due to their overload.

8.4 Post-service phase

The main foreseen services in this phase are related to follow up on the implementation of the advised measures and gather feedback from realised projects to be used to disseminate for potential future projects

8.5 SWOT Analysis of Brunnthal Community Energy Action Plan

The SWOT analysis was taken from D2.3

8.5.1 Strengths

Marketing materials and their distribution channels are well known to GreenCom and therefore the OSS can be educated and supported in that respect.

8.5.2 Weaknesses

Low attention of citizens for RE-/ EE- projects and environmental activities might prevent high interest, registrations and finally participation in collective actions. Also, as we have a very high number of single-family houses, homeowners are used to run renovation-/investment-projects by themselves rather than being part of a collective action.

8.5.3 Obstacles

If legislation for REC's will be introduced during the runtime of the OSS by the new government, the OSS could be a great vehicle to kickstart REC's

8.5.4 Threats

RE-/EE-Suppliers are fully booked for months due to high demand for such technologies/installation services, therefore realization of such projects in the OSS could be postponed massively.

Prices for installations, especially the work time to be paid, are extremely high and make RE-/EE-projects less attractive in terms of ROI.

9 Conclusions

The report presents the background to and the objectives of the development of the community energy plans for each pilot. The methodological approach and an overview of the key elements of the planning, opening and operation of the OSSs. The document supports the overall objective to define the framework of the actual planning, establishment and operation of the OSSs that support the creation of energy communities on their territory