DISCOVER

D.4.1 Summary of stakeholder feedback

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List of Abbreviation and Acronym

Abbreviation	Meaning
CEP	Community Energy Projects
OSS	One Stop Shops
DSO	Distribution System Operator
PV	Photovoltaic
EC	Energy Community
REC	Renewable Energy Community
ESCO	Energy Service Company
DETC	Directorate for Energy Transition and Climate
DU	Directorate for Urbanism
DLH	Directorate for Housing and Habitat
ALEC	Agences Locales Energies Climat
GSE	Italian Manager of Energy Services
RENAEL	Italian network of local energy agencies
COPE	European Point Consortium
NRRP	National Recovery and Resilience Plan
ARERA	Regulatory Authority for Energy, Networks and Environment
ECASS	Energy Community Analysis and Simulation Services
UNIRI	University of Rijeka
SW	Software
CECB	Chamber of Energy Communities in Bulgaria
EERSF	The Energy Efficiency and Renewable Sources Fund
SEDA	Sustainable Energy Development Agency

1 Introduction: DISCOVER Project

1.1 Overview

DISCOVER is an innovative LIFE project with the strategic aim to support the transition to a renewable energy-driven society. By fostering Community Energy Projects (CEPs), DISCOVER will empower stakeholders and citizens and mobilize significant investments in renewable energy generation in pilot regions across Europe. DISCOVER will catalyse the launch of CEPs in 5 diverse European regions respectively in Austria, Bulgaria, Croatia, France and Italy. Local hubs will be set up to pilot innovative support mechanisms for CEPs. The hubs will deliver guidance and practical services on the technical, economic, financial and legal aspects and will help connect CEPs to local service and technology providers. The services will cover all developmental stages of CEPs, accompanying them throughout their entire lifecycle.

Considering the diverse socio-geographical-legislative and market maturity levels across these 5 pilot regions, DISCOVER will follow a regionally specific approach with four local service hubs. On top of that, an interactive online tool will be designed to provide extensive support to local communities embarking on Renewable Energy Projects.

DISCOVER aims to simplify decision-making processes and reduce operational barriers by connecting projects with local service/technology providers and relevant authorities.

During the 3-year timeframe (2023 – 2026), DISCOVER is expected to reach more than 20,000 citizens, support 20 new initiatives (focusing on community PV installation), and trigger a total investment of more than 7.7 million euros. The project will promote and facilitate the recreation of future service hubs in other regions to ensure replication across other European regions.

The DISCOVER consortium stands as a collaborative force spanning over five European countries, each committed to driving the vision of CEPs within their respective region. The consortium comprises active national/ regional leaders in the CEP initiatives, well-connected to citizens, local authorities, and stakeholders.

1. "WP4 Implementation of Community Energy Services in pilot hubs" activities

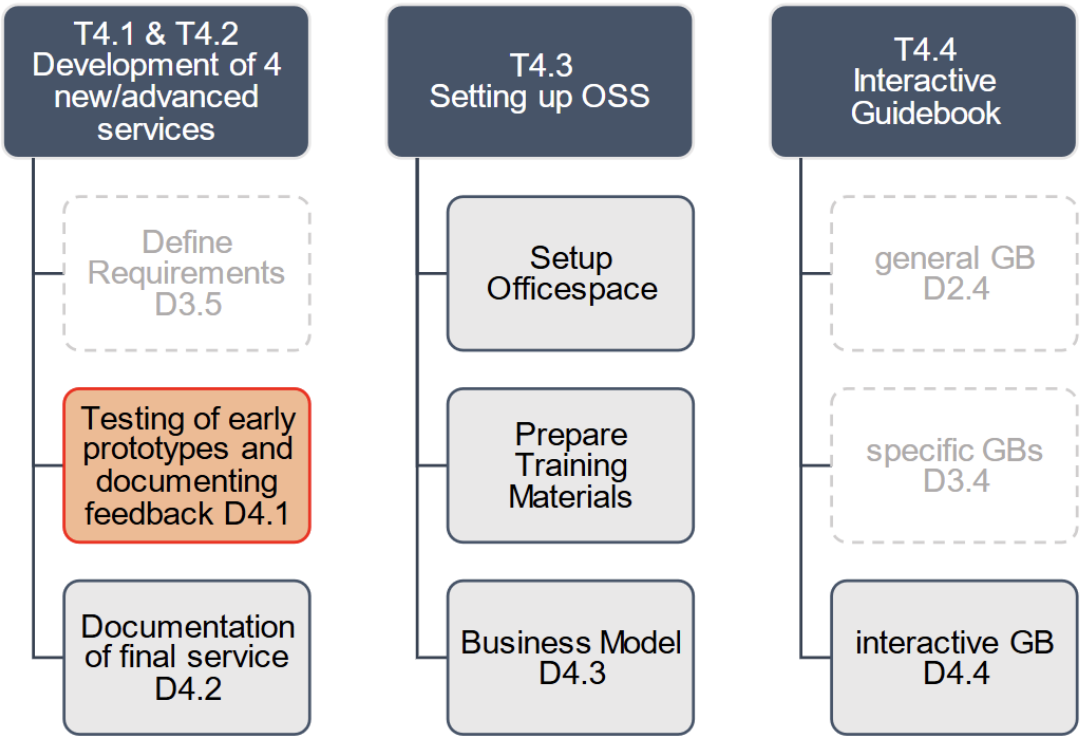

Figure 1: Overview of Activities and deliverables of WP4 (dashed boxes are precursors developed during previous WPs)

The goal of WP4 is to establish four OSSs – one in each pilot region. Furthermore, testing and improving the already selected new/advanced services will be done, followed by the implementation of the interactive guidebook, a web version of the specific guidebook. The activities are carried out in close cooperation with key stakeholders, following the methodology for stakeholder engagement (D3.1). This guarantees that the services are developed according to the stakeholders' needs. There is one stakeholder selected as a development partner for each pilot region, who provides consultations during all stages of service development. Additional feedback is collected through questionnaires and organization of workshops (Task 4.1). Finally, the stakeholder feedback is summarized in a stakeholder feedback report (D4.1 Summary of stakeholder feedback), on the basis of which the services are improved.

The requirements for each new/advanced service are summarized before the development started and can be found as Deliverable D3.5. Based on the stakeholder feedback, gathered during the development phase, refinement of the services and their technical specification is expected. This methodology follows the lean-development process, which allows to continuously test early prototypes to guarantee a product market fit and optimizing developmental efforts. The core development activities include the collection of relevant information via desktop research and stakeholder involvement, the setup of methodologies, the technical development of tools and user experience (UX) improvements. The results are summarized in D4.2 - Documentation of 4 newly developed services. Once fully developed, the services are integrated into the interactive guidebook, a web-platform which makes the specific guidebooks accessible online (T4.4). This requires representing the CEP lifecycle on an

interactive homepage. The results are summarized in D4.4 - Extended Standardized Service Tool/Web-Platform.

WP4 provides for the actual establishment of the local service hubs (T4.3) through activities aiming at setting-up the OSSs in the four pilot regions (office/room/hotline); development of the business model for each hub/OSS; preparing training materials and organization of trainings for experts who will work in the OSS; setting up a customized multilingual Moodle platform which will serve as a repository of the OSS documentation. The results of the establishment of the hubs are summarized in D4.3 - Report on OSS business model.

2 Summary of the stakeholder feedback

2.1 Overview of the document

This document is D4.1 Summary of stakeholder feedback, which results from the implementation of T4.1 of the project. It presents a report on the stakeholder feedback gathered during the development process of four new/advanced services. This document captures changes to the initial service requirements, drafted within WP3 by the partners APC, AGENA, WB and IESDI under the guidance of PIXEL.

Feedback collected throughout the service development process ensures that the proposed solutions are aligned with stakeholders' needs and expectations. It describes the unified methodology adopted by the partners and explains how this approach was implemented within each local context.

Finally, the document outlines key findings emerging from the stakeholder engagement activities and illustrates how this input contributed to the refining of the services. The report concludes with an evaluation of each service acceptance, identifying whether it has been positively accepted or requires further improvement.

2.2 Structure of the document

The structure of this document follows the logic of deductive reasoning – beginning with the presentation of a general approach for stakeholder engagement accepted by the partners, which is then adapted to the specific local contexts, ultimately leading to concrete conclusions. The document is organized as follows:

A) A presentation of the general and unified methodology for stakeholder engagement, agreed upon by the partners as a common framework for interaction with stakeholders;

B) Individual reports from each partner detailing the adoption and application of the methodology in accordance with local conditions and specific context;

C) A summary of the main findings derived from stakeholder feedback, including identified areas where services may require improvement;

D) Final conclusions indicating whether each service is well accepted or requires further refinement and outlining the specific directions for potential enhancement.

2.3 Selected new/advanced services per partner

Resulting from the in-depth analysis and co-creation process under WP2 and WP3, four new/advanced services have been designed by the partners, described in detail in D3.5.

The new/advanced services are herewith summarized, as follows:

Table 1: Overview of new/advanced services

Name of the service	Responsible partner	Country
Analysis of opportunity for PV projects – technical, economic, and legal dimensions	APC	France
Preliminary Technical – Economical Assessment for CEPs	AGENA	Italy
Energy Community Analysis and Simulation Services – ECASS	WB	Croatia
CEP Real Life Modelling (CEP - RLM)	IESDI	Bulgaria

3 Overall stakeholder feedback methodology

The methodology for stakeholder engagement during service development builds upon the outcomes of Task 3.1, wherein the key stakeholders relevant to the service were identified. A unified approach to stakeholder interaction, as outlined below, was proposed and subsequently adapted by each partner to suit their respective local contexts. Within this framework, a main stakeholder has been designated as a development partner. This stakeholder plays a pivotal role throughout all phases of service development, offering professional expertise and critical insights. Their continuous involvement ensures that the scope and functionalities of the service align with stakeholder expectations. The development partner contributes to the early conceptualization and testing of premature services.

In addition to the **main stakeholder**, a broader group of stakeholders contributes to the process by offering support and feedback, referred to as **participating stakeholders**. They are categorized into two groups: **Facilitators**, who provide expert knowledge, and **Customers**, who represent the end users. Facilitators may include Distribution System Operators (DSOs), associations, public institutions, development agencies, banks, municipal technical departments, and key industry players. The customer group comprises municipalities and condominiums, regarded as potential initiators of Community Energy Projects. Specifically, IESDI, AGENA, and BEZ GRANICA will engage municipalities as customers, whereas APC will focus on condominiums.

The primary objective of stakeholder engagement is to evaluate whether the service is professionally designed and adequately meets customer expectations. To this end, three targeted questionnaires have been developed – one for facilitators and two for customers – distinguishing between municipalities and condominiums to account for their differing profiles and requirements.

Stakeholder feedback can be ensured through different approaches, including workshops, bilateral meetings, virtual consultations, phone interviews, email correspondence or other appropriate techniques. Each partner is responsible for selecting the most effective method of engagement based on the characteristics of their local environment. The ultimate objective is to foster dialogue on the service's development and obtain critical feedback necessary for its validation and ongoing improvement.

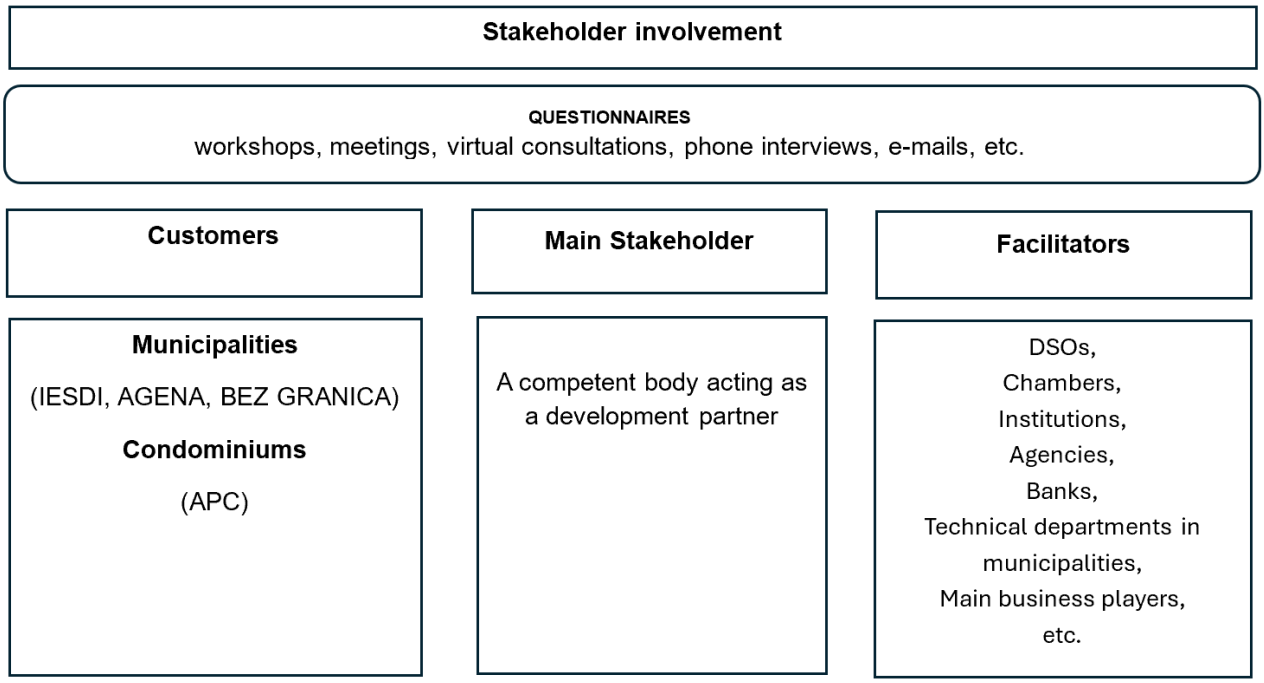

Figure 2: Overview of the Stakeholder feedback methodology

4 Main findings

4.1 Stakeholder feedback summary – France

4.1.1 Name of the new/advanced service

Analysis of opportunity for PV projects – technical, economic, and legal dimensions

The service targets condominium representatives in Paris city who intend to launch a PV project in their building, during the development phase. As collective housing units, self-consuming condominiums are small energy communities and precursors of communities at a larger scale (involving private flats and other neighboring buildings within a collective self-consumption scheme).

The objective is to help them navigate the first steps before reaching out to professionals. The service should give insight into both technical, economic and legal aspects of their situation and explore possible scenarios of a project. It should facilitate decision-making on how to launch a project that matches their needs and aspirations.

Stakeholder feedback was asked for while the service is still in development. The service proposed to stakeholders for feedback is still in the development phase. So far, it has focused on technical and economic aspects. It evaluates the production capacity of the building rooftops, the matching of load and production curves, the expected savings on bills, the revenue streams from marketing surplus electricity. The financial parameters and legal aspects are yet to be addressed.

The service will be delivered by Agence Parisienne du Climat (APC), a non-profit association. It will be free, neutral and independent. It will be tailored to the needs of each condominium. It should start with an introductory online meeting, then analysis will be developed as new information is obtained. A final synthesis (pdf file) will be sent to the user.

4.1.2 Main stakeholder

Ville de Paris – Paris City

Paris City is a main stakeholder for CEP development in Paris through its housing, energy and urbanism policies and projects. Agence Parisienne du Climat (APC) acts on the mandate of Paris City elected officials to deliver the service to condominiums and turn into the one-stop-shop for Energy Communities. However, no feedback on the service was asked for from them. The service is our Agency's responsibility as it targets private projects.

APC is in touch with each of the relevant administration directorates of Paris City and consults them when needed: Directorate for Energy Transition and Climate (DTEC), Directorate for Urbanism (DU) and Directorate for Housing and Habitat (DLH).

4.1.3 Participating stakeholders

- **Condominiums and Professionals registered to Coachcopro platform:** Main clients for the service are the potential private residential clients for PV production and self-

consumption in Paris. Participating stakeholders are the Professionals that could offer them the installation and exploitation services. More than 10 000 condominiums in Paris and 800 professionals are registered to Coachcopro platform, Agence Parisienne du Climat (APC) online tool for user support.

- Registered professionals are mainly architects and engineer firms, specialized in energy renovation but not in PV. They could decide tomorrow to develop a business branch for PV. Among them, a handful have already specialized in PV and two were asked for feedback on the service (Enercoop and Enerev, see below).

- Coachcopro-registered condominiums are either preparing or conducting the energy renovation of their building. However, extremely few of them are equipped with PV or engaged in a PV project. They represent a significant potential for PV to activate. A call was made to 300 registered condominiums with large and plane rooftops, offering them the service. Other communications to our network of registered condominiums were made from December 2024 to May 2025 (2 webinars, 1 in-person conference, a new flyer) in order to make APC known as the new reference actor for PV and Community Energy Projects. Creating momentum at the scale of Paris on such a pioneering topic takes time, and it is expected in the development phase of the service that more than 100 condominiums will have benefited from it by the end 2025.

Being the final user, condominiums were *not asked directly* for feedback. However, the service was tested with them, their reactions helped understand how to adjust it to their needs. The service will continue to be tested continuously throughout the duration of DISCOVER Work Package 4.

- **FLAME network:** The FLAME network is the collaboration and resource-sharing network for local climate and energy agencies in France (Agences Locales Energies Climat, ALEC). Agence Parisienne du Climat is ALEC for Paris. FLAME brings together 39 ALECs and reaches 22.5 million people. Initially specializing in building heating, it is increasingly extending its skills to include support for community energy projects and photovoltaic development. A wealth of case studies from all over France, in a variety of contexts, provide inspiration and comparisons in the developing of our own service.

- **ALEC POLD:** ALEC POLD is an association and a member of FLAME network. It is the local energy agency for western sector of Grand Paris Metropolis, including the La Défense district. It supports private individuals, professionals and institutions in their energy transition. For over a year now, it has been supporting photovoltaic projects for professionals, as well as collective consumption in *condominiums*, making it a prime stakeholder. Although its volumes are smaller than those of APC, some of these projects are at an advanced stage of development. In this way, ALEC POLD has already developed technical-economic and support tools that have proved their worth. These tools have been a source of inspiration in the development of APC's one.

- **Grand Paris Climat:** Grand Paris Climat (GPC) is the new federation of the eight ALECs of Grand Paris Metropolis. It provides support to ALECs in the architectural aspects of energy projects. GPC is supporting especially ALEC POLD for two PV projects (not in

condominiums) with 3D modelling of buildings to help convince Urbanism and Heritage protection administrations of the architectural integration of PV panels.

- **Energie Partagée**: Energie Partagée is an association. It is the main support initiative in France for energy communities and the citizen movement. It provides support at every phase of projects, both financial, technical and administrative. So far, no project includes condominiums. The regional branch of Energie Partagée has expressed its interest in DISCOVER project and started a collaboration with APC to make citizen funding a viable solution for condominium PV projects.

- **Hespul:** Hespul is an association which operates the French national resource centre on photovoltaic (photovoltaic.info). As a reference actor in France, APC has been collaborating with them since the start of DISCOVER. They are currently developing a new page of photovoltaic.info website for condominiums. Collaboration with them is mutually fructuous.

- **Enerev:** Enerev is a private company specialized in building photovoltaic projects, historically developing solutions for individual homes and professional buildings. Today, the company is looking to expand into the condominium market, particularly in Paris, and develop solutions for collective self-consumption of electricity. The company's services range from feasibility studies and design to project management and plant operation.

- **Enercoop**: For over 20 years, it has been developing electricity production projects using photovoltaic energy through a cooperative model. Today, it is seeking to establish itself within residential condominiums, particularly by creating collective self-consumption loops based on rooftop solar production.

4.1.4 Approach

Our first approach was made at a professional exhibition organized by the APC the 8th of April 2025: ‘Forum Habiter Durable’, which brings together all the Parisian stakeholders involved in the energy transition of condominiums. Among the invited partners were three of our stakeholders, Enerev, Energie partagée and Enercoop, who were there to present their activities. They were approached through informal professional discussions. It was agreed during these meetings that we would work together, particularly in the context of DISCOVER and the development of our service. These stakeholders received a paper version of our feasibility study.

Then, for professional stakeholders including those at the forum, the consultation took place as follows. By email, a request for an evaluation was made by the APC on its PV opportunity analysis service. This request included a definition note of its service resulting from WP3, as well as the two main tools it is developing for this service: its condominium support roadmap and its feasibility study. Finally, the email included a list of questions to guide the evaluation. The evaluations were based on email responses and most of the time, one-hour videoconference interviews for discussion.

Finally, for condominiums, the feedback came from one-hour video conferences held throughout April and May 2025. During these exchanges, we present through pre-feasibility studies, the solar potential of the roof of each condominium helped. It was also an opportunity to explore condominium's motivations and needs.

4.1.5 Summary of the stakeholders' feedback

- **FLAME network:** Very few agencies in the network have developed CEP projects in urban areas or with condominiums. Even though the various cases we have observed have enabled us to understand the essential elements to be included (technical feasibility, drafting, comparison of operating models and economic forecasts) in our service, they also highlight the specific nature of our target compared with projects with institutions. Multi-stakeholder dialogue, inertia in decision-making, mistrust about the viability of a CEP and a greater need for economic profitability all need to be considered for our service to condominiums.

- **ALEC POLD** praised our two-stage approach (pre-feasibility study + videoconference then complete study) for effectively identifying motivated condominium prospects and building trust—crucial for long-term project success. They appreciated the completeness of our feasibility study and the educational inserts that help co-owners understand technical issues. However, they found our language too technical and not aligned with customer expectations. Customers prefer simple, accessible communication, with detailed focus only on specific topics—usually economic or legal—when requested. Overly complex content risks losing their interest. Lastly, ALEC POLD noted that the legal support in our service offering is too limited to meet current customer needs.

- **Grand Paris Climat (GPC)** praised our in-depth approach but found it too light in architectural matters. They advised us to integrate architectural constraints (heritage protection and urban design rules) in our process and service from the start. They offered to deliver a complementary service of 3D modelling of buildings in Paris concerned with specific heritage protection challenge.

- **Energie Partagée** noted that the document was concentrated on technical and economic matters and should extend to other relevant aspects, legal, social, ethical, ecological... The service should help the user decide what its objective is, and which entity will bear the project (which is the client?). They advised us to include the scenario of citizen investor group. They advised us to promote collective self-consumption and reduced surplus to its minimum, considering the current unattractive feed-in tariff for surplus.

- **Hespul** found our approach insightful for their own work. They helped us make the document more adequate to current rules at the national level and current practices in the PV sector. They reminded us of the priority that should be given to energy sufficiency before talking about producing energy. Likewise, they advised us to propose a range of different scenarios to adapt to the different types of condominiums (building type, consumption and production profiles, expectations as a Council Board).

- **Enerev** praised our service for effectively supporting CEP prospecting in complex urban areas like Paris. They emphasized the importance of simple calls for interest and systematic pre-studies to spark engagement. Enerev supported APC's choice to provide in-depth support to all prospects, even if not all projects succeed. They highlighted the need for a clear, accessible summary alongside the full feasibility study to help co-owners understand key motivations and figures—crucial for mobilizing support. While

they value the depth of APC's service, Enerev noted that in the future, a simpler approach may be needed to respect the role of other professionals. Lastly, they pointed to a lack of legal understanding, especially around French juridical setup for CEP, and encouraged APC to help all stakeholders, including themselves, build competence in this area.

- **Enercoop** : Enercoop found the study very comprehensive and potentially useful to their work with condominiums. Enercoop highlighted how this service could fall into their process. More feedback will be asked to further develop this service.

- **Condominium** have found our service useful, particularly the preliminary study. They appreciate the visualization of their building's solar potential and possible installation. They also note the long-term support of the APC and its attentive listening. However, they note the gap between a holistic vision of the state of their building (structure, energy, dilapidation, social) and our approach focused on solar projects. From the very first discussions, they expect a greater connection between their context and our support.

4.1.6 Areas of improvement

We found 5 main areas of improvement:

- Integrate architectural and urbanism constraints from the start
- Explore more in details legal options for condominiums
- Include support for governance, inclusivity, and the social dimension
- Use simple and accessible language and format (summary...)
- Adapt to multiple needs and expectations from the users

We were repeatedly reminded of the importance of adapting our complete study for an impactful summary focused on economic balance sheets. It seems essential to identify the motivations and technical level of our interlocutors, to best adapt our tool to each individual case.

4.1.7 Conclusions

After consulting with stakeholders, we realized our approach needed revision. Although our service was designed to be somewhat adaptable, we found that each CEP project is unique in its technical, legal, and social aspects. The users involved and their contexts vary widely, making generalization difficult. Therefore, our service must be more versatile than originally planned. It needs to be exhaustive, covering five key areas: technical, economic, legal, architectural, and condominium decision-making. It should also be modular, allowing deeper focus on one or two of these areas as needed. Finally, it should be easy to summarize for wide distribution among co-owners.

4.2 Stakeholder feedback summary – Italy

4.2.1 Name of the new/advanced service

Preliminary Technical – Economical Assessment for CEPs

The advanced service "**Preliminary Technical – Economical Assessment for CEPs** "will involve supporting project initiators in developing a preliminary economic feasibility analysis of their investment through an initial cost-benefit assessment. This will be based on an energy autonomy analysis that examines the complementarity between load and generation profiles. The analysis will be structured around the following points:

- Identification of potential CEP members
- Characteristics of their electricity production profiles and electricity consumption profiles
- Analysis of energy trading potential within the community

For the economic assessment, it will be necessary to account for costs (such as investment, operational, and maintenance costs), available incentive schemes (e.g. NRRP) and revenues (e.g. revenues from grid sales, self-consumption configurations for renewable energy sharing (CACER) incentives, ARERA (Regulatory Authority for Energy, Networks and Environment) compensation, savings on electricity supply costs, and revenues from other incentives and financing options). We will analyse four different financing models:

1. PV plant fully funded by members
2. PV plant funded through a bank loan
3. PV plant funded by a third party (e.g., ESCO or utility)
4. PV plant built using NRRP funds

The main financial economic indicators that will be used to evaluate the economic return in an energy community are the Payback Period, Net Present Value, Internal Rate of Return. Similarly, energy-environmental indicators will be used to assess the sustainability of the establishment of an energy community, such as physical self-consumption index, virtual self-consumption index, Energy self-sufficiency index and avoided CO_2 emissions.

4.2.2 Main stakeholder

The main stakeholder is GSE, the Manager of Energy Services. GSE has been identified by the State to pursue and achieve environmental sustainability. In particular, GSE promotes renewable sources and energy efficiency, and it manages incentive mechanisms.

AGENA is a member of the Energy agencies Italian Network (RENAEL), which gathers all the Italian local Energy Agencies. In 2023, RENAEL signed an agreement with GSE to support the development of energy communities at local level.

Concerning Energy Communities, GSE is in charge to create incentive and financing instruments to support REC deployment, and provide information, training, and administrative simplification. The operative rules of GSE will be included in the tool.

4.2.3 Participating stakeholders

The stakeholders selected to participate in the consultation of the service fall into two main categories: facilitators and customers (potential initiators of CEPs, such as municipalities and dioceses).

Facilitators

The main consulted facilitators are:

- Province of Teramo
- University of Teramo - Research Centre for green transition, sustainability, and global challenges
- the European Point Consortium (COPE),

The Province of Teramo is one of the four provinces in the Abruzzo Region. The province covers an area of 1,948 square kilometers and has a population of 299,796 (2022) inhabitants. The province of Teramo includes 47 municipalities. The Province of Teramo has a crucial role in the development of CEPs as it provides information, facilitates the aggregation of people and supports communication and dissemination activities, and the start-up of the hub.

The University of Teramo - Research Centre for green transition, sustainability, and global challenges aims at studying the theme of energy transition from a multidisciplinary perspective, with particular focus on the political, institutional, and constitutional issues that arise from it. It can have an important role providing support in the definition of the best form of legal entity applied to RECs for the specific contest. They are important for the service for the taxation according to the typology of legal entity and for establishment and management costs of a REC.

The European Point Consortium (COPE), a mixed public-private non-profit entity not subject to public control, has been established by its founding members with the aim of creating an information and planning center focused on EU social and economic policies, in order to respond to the diverse needs of all social and economic sectors. The Consortium positions itself as a key hub at the local, provincial, and regional level for the dissemination of information and services, as well as for listening to emerging needs. It serves as a planning and proposal laboratory for the full exercise of European citizenship, facilitating and enhancing awareness of rights, duties, and rules — but above all, of the pathways and conditions for accessing the programs, activities, and the many important cultural and financial opportunities offered by the European Union.

COPE supports the energy transition through communication and dissemination activities towards citizens, in addition to administrative support. It can provide consultation on the structure of the tool and user-friendly interface.

Customers

The customers engaged so far are:

1. Municipality of Castelli
2. Municipality of Tortoreto
3. Diocese of Ascoli Piceno

Castelli and Tortoreto represent 2 out of 4 municipalities that have shown interest in being involved in the DISCOVER project since the drafting of the proposal, supporting their interest through the signature of a letter of support.

Castelli is a mountain municipality located within the Gran Sasso National Park. The historic center is well preserved, and due to the value and preservation of its territory, along with its history and traditions, is included among the "Most Beautiful Villages in Italy." It has a population of fewer than 1,000 inhabitants and, like all small municipalities, it suffers particularly from a lack of financial resources and internal expertise. The municipality is seeking support to assess the technical and economic feasibility of establishing an Energy Community (REC) in its territory and to access NRRP funds. The goal is to contribute to sustainability and energy self-sufficiency, as well as to use it as a tool for local development in a community at risk of depopulation.

Tortoreto is a municipality on the Adriatic coast with about 12,000 inhabitants. It is divided into two main areas: Tortoreto Lido, the coastal tourist zone, and Tortoreto Alta, the historic center located on a hill.

Both municipalities have joined the Covenant of Mayors, showing since 2011 a particular commitment to the energy and environmental sustainability of their territories.

The new service was illustrated during face-to-face meetings with the political parties.

The Diocese of Ascoli Piceno is a religious entity of the Marche Region (a region bordering Abruzzo region). The Diocese of Ascoli Piceno, following the invitation of the CEI (Italian Episcopal Conference) addressed to all dioceses to promote energy communities in their territories — based on the broader reflection on the Care for Creation inspired by Pope Francis's encyclical *Laudato Si'*— has expressed interest in being involved in the DISCOVER project. The Diocese of Ascoli covers a fairly large area and includes 70 parishes.

The new service was presented during an in-person meeting with the bursar of the diocese.

4.2.4 Approach

Municipalities often face a daunting challenge: how to invest in sustainable initiatives like energy communities with limited financial and human resources. The decision to implement such projects requires careful consideration of technical and economic feasibility, long-term sustainability, and the potential benefits of incentives, public grants, and tax deductions. AGENA, understanding this complexity, is playing a crucial role in the Province of Teramo by not only analyzing data but also informing and facilitating the decision-making process.

AGENA's approach is rooted in a thorough understanding of the local needs, a key element identified in the project's initial research (WP3). To further assess the viability and desirability of new energy community service, IESDI, developed two questionnaires specifically designed to gather feedback from key stakeholders (facilitators and customers).

1. Service consultation with Facilitators:

The consultations are still ongoing, but the facilitators involved so far are the Province of Teramo, COPE and the University of Teramo.

The interaction with the province of Teramo is almost daily, as AGENA is an in-house company of the province and carries out on its behalf several services. Specifically on the development of energy communities, AGENA and Province of Teramo have often discussed the best strategy to adopt to engage the territory and promote the development of CERs. The new service was introduced in person and then analyzed by means of a telephone interview, followed by the transmission of the questionnaire by e-mail.

Similarly, Cope and the university were contacted by telephone to explain the service and a questionnaire prepared by IESDI was administered.

These meetings/ interviews provided useful feedback. This feedback is summarized in4.2.64.2.6Areas of improvementAreas of improvement" and can be significant for service development, improvements, relevance and user friendliness.

2. Service consultation with Customers:

The meetings with consumers to gather feedback on the proposed service were integrated into a broader support process for the initiator in the implementation of a Renewable Energy Community (REC). The meetings were held face-to-face in order to help participants become familiar with the topic and to create a climate of mutual trust.

The meetings were structured in two phases: the first was informative (covering the steps for establishing a REC, its members, benefits, incentives, and the possible roles of the local authority), and the second was dedicated to the services offered by AGENA within the DISCOVER project, with a focus on the advanced service.

Subsequently, a questionnaire prepared by IESDI was sent by email to allow participants to reflect on the service provided and suggest improvements for its optimization.

In particular, the meeting with the mayor of the **municipality of Castelli** was held at AGENA office on 17th March 2025. The main topics concern the steps to set up an energy community in the municipality, analysis of primary energy substations, financing opportunities and new deadlines for NRRP, analysis of the services provided by AGENA under the umbrella of DISCOVER project, with a focus on the new service.

The meeting with the municipal council of the **municipality of Tortoreto** was held on 10th April 2025 in Tortoreto. The main topics concern the role that a municipality can have to unlock the full potential of RECs due to its unique position (i.e. policy and regulation, facilitation and coordination, energy planning and strategy, public awareness and education); steps to set up an energy community, incentives, analysis of the services provided by AGENA, with emphasis on the new service.

The meeting with the Diocese of Ascoli was organized on 21st March 2025 at the diocese's office in Ascoli Piceno. This was the first meeting with the diocesan bursar following prior phone conversations. The goal was to present the DISCOVER project and understand the needs of the counterpart. An ecclesial organizational model was proposed, in which the religious institution acts as the promoting entity, with individual parishes joining the initiative. At this stage, there are no plans to involve families in the membership process. In this way, the central role of the parish simplifies both the management and the relational aspects among the parties, as they are all part of a shared ecclesial project.

The Diocese of Ascoli requested a prior and responsible assessment regarding the opportunity to establish an Energy Community, taking into account the most appropriate technical, economic, and legal solutions, which must be defined in relation to the specific local context. On this basis, the service offered was received with great interest.

4.2.5 Summary of the stakeholders' feedback

All the consulted stakeholders are aware that CEP initiators face several challenges when starting the process. Municipalities, often struggling with limited economic resources, find it difficult to justify the initial investment without a clear picture of the potential benefits and return. Addressing this key issue can allow municipalities to move forwards at an early stage.

All stakeholders agree that AGENA will serve as a single point of contact, providing commercial independence and neutrality and offering tailored consulting services free of charge to municipalities, religious entities, and citizens interested in CEP development.

A key component of AGENA's service is a preliminary technical-economic assessment. This comprehensive evaluation provides clarity on the estimated costs and benefits of the CEP over its projected lifespan. By providing concrete data, stakeholders can make informed investment decisions based on solid financial projections, rather than relying on assumptions or perceived risks. The concept for AGENA's service was confirmed by stakeholders and result in no changes to the requirements previously described in D3.5.

Furthermore, AGENA's assessment compares different financing models, helping project initiators identify the most suitable business model for their specific project and community. This process helps to optimize the financial structure and maximize the long-term success of the CEP.

4.2.6 Areas of improvement

The Province of Teramo suggests structuring the "preliminary technical – economic assessment" in a simple and intuitive way and to allow the download of a pdf report containing the inputs and results of the simulation valid for the community, but also, if possible, for the single involved participant.

Cope suggests that operational leasing and finance leasing should be added to the financing already envisaged.

The University suggests in case you do not have punctual consumption for a certain period of time, try to create categories of consumers (e.g. residential, schools, offices, etc.).

4.2.7 Conclusions

All the stakeholders involved (facilitators and consumers) have shown interest for the service and they consider useful for the initial phase of CEP establishment and essential to understand the technical and economic feasibility of the investment in order to assess its sustainability. Consumers see it as crucial for facilitating the decision-making process. Consumers would like a user-friendly tool with outputs that are easily understandable even for non-experts.
Facilitators consider the proposed service to be highly useful. They see it as complementary to other services they are developing and are willing to contribute to its implementation through dissemination efforts, guidance on taxation based on the types of participants, and suggestions for a simple and intuitive layout.

4.3 Stakeholder feedback summary – Croatia

4.3.1 Name of the new/advanced service

Energy Community Analysis and Simulation Services – ECASS

The preparations and activities on Croatian version of DISCOVER guidebook itself pointed out that there is a lack of adequate SW tools to support the establishment of energy communities, the process is complex, and especially the economic effects or benefits for future members are not clear. In this sense, Bez Granica team decided to create a simple to use tool to simulate the effect of joining energy communities for interested citizens. The tool is a WEB based application, it is very easy to use, and appropriate instructions for use have been created.

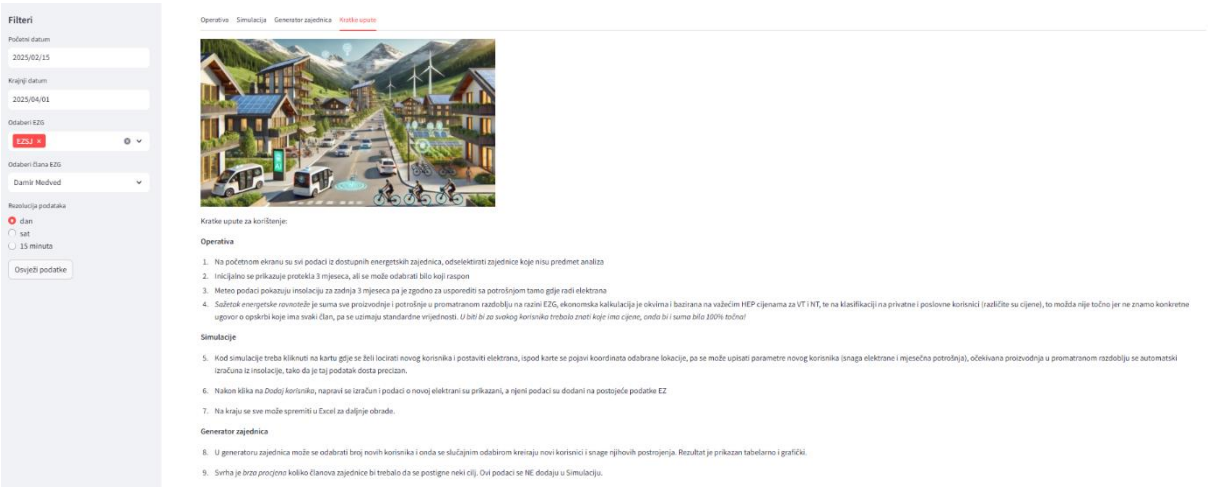

Figure 3 ECASS Tool introduction and help

The starting point of the ECASS project was good understanding of the needs and processes in the establishment of the EC (Bez Granica are members of the Energy Community of the Northern Adriatic), and excellent cooperation with the University of Rijeka – Center for Smart and Sustainable Cities, where we received expert support for the selection of the methodological framework, definition of business processes and optimization algorithms.

We believe that this tool will have broader potential and a wider significance, we have not noticed that there is anything similar, and the need was clearly expressed at the workshops we held. We believe that its implementation will facilitate the processes of establishing the EC in Croatia.

The development of the tool itself was realized within the association with assistance of main stakeholders.

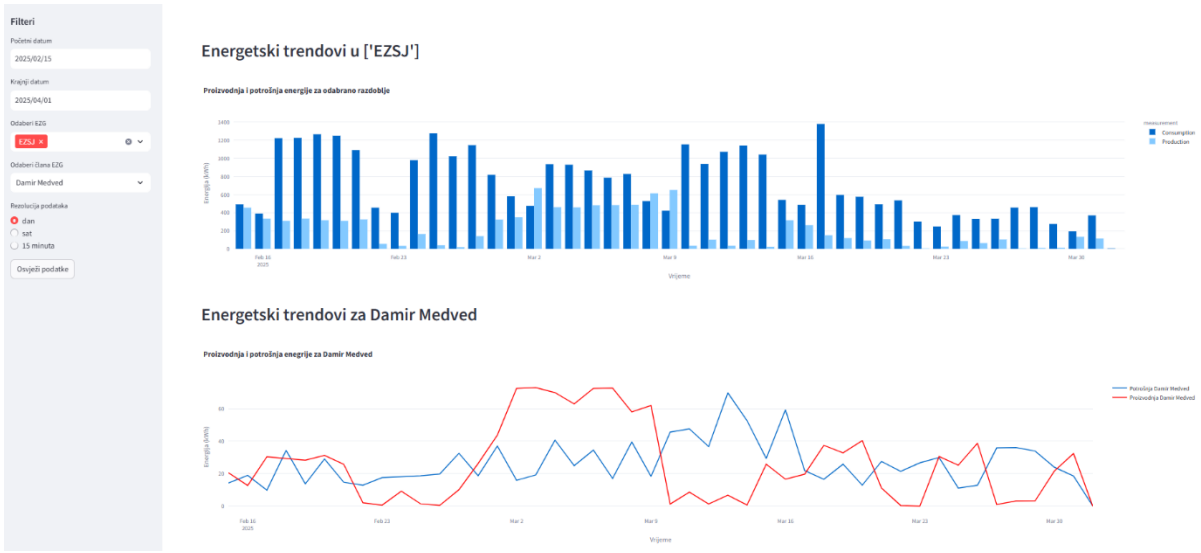

Figure 4 ECASS CEC user analysis and trends

The application was made using modern technologies and interfaces, is reasonably scalable, and can process large amounts of data if needed. Particular attention is paid to the speed of work. Currently, there are several million data measurements in the database, and there are no delays in processing. In situations where more detailed data is available, more extensive analytics based on artificial intelligence technologies are also applied.

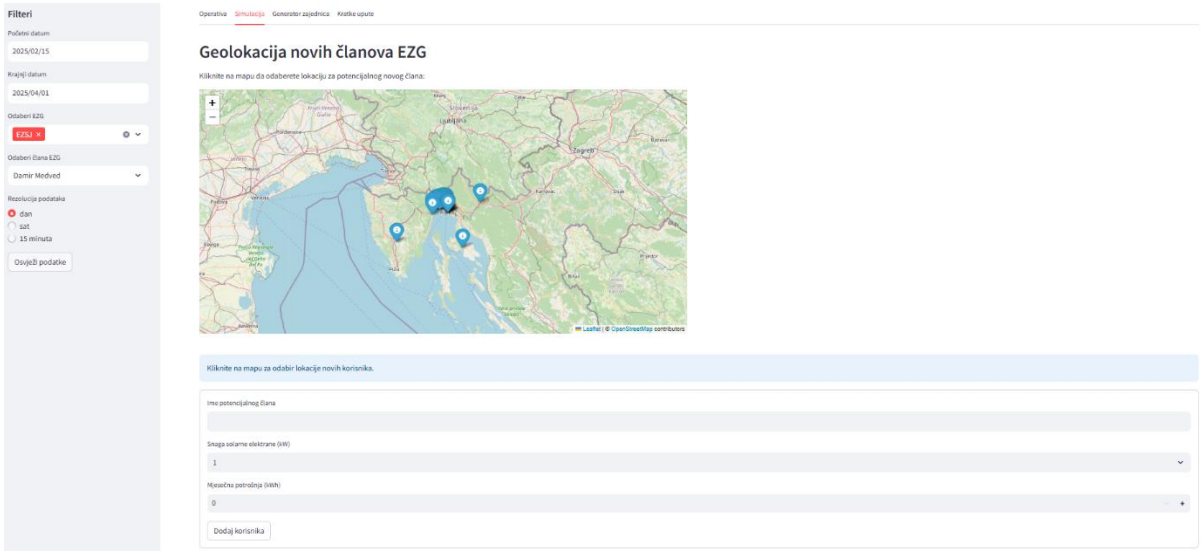

Figure 5 ECASS simulation subsystem

The tool is currently still in the testing and improvement phase and will become more widely available with the opening of the OSS Drenova.

4.3.2 Main stakeholder

University of Rijeka - Center for smart and sustainable cities

For many years, Bez granica has been successfully cooperating with the UNIRI Center for Smart and Sustainable Cities. Their expertise is complementary to our activities, and the cooperation

is carried out in two dimensions. The first relates to scientific research, and the second to educational activities.

Scientific research activities are aimed at investigating the phenomenon of transformation from the traditional concept of an administrative unit with flexible and sporadic use of data from long past periods to a modern concept within which, for the purpose of decision-making in all areas of the functioning of a smart city or region, decisions are made based on data collected in real time and in accordance with optimal technical and business processes. New technologies, the problem of applying artificial intelligence and energy transition are the main areas of interest and cooperation.

Educational activities are determined by the subject and purpose of the Centre's work. The goals of educational activities are to familiarize subjects from the public and private sectors with the significance of all components of identifying, collecting and using multidimensional data for the purpose of machine and human decision-making in real time, as well as the processes of preparing and implementing real city projects.

For the needs of the LIFE DISCOVER project, the UNIRI Center provides support in defining the methodological framework for CEC development assessment and support in the economic part of analysis and software development.

Regional Development Agency of the Primorje-Gorski Kotar County

The public institution "Regional Development Agency of the Primorje-Gorski Kotar County" was founded at the beginning of 2018 by the Primorje-Gorski Kotar County. The purpose of the Agency's activities is to coordinate and encourage sustainable, balanced regional development of the county, and to attract potential investors in key activities characteristic of the development of this area.

The agency is a support centre for Primorje-Gorski Kotar County and legal entities owned by it, local self-government units from the county and their legal bodies, through activities of advisory and expert assistance in the preparation and implementation of development projects, both local and regional, as well as of national significance.

The Agency has a total of 16 employees, experts with many years of experience and competence in specific areas of work, employed in the Department for the preparation and implementation of EU projects and the Department for the preparation and implementation of strategic documents and programs.

Cooperation with the agency takes place primarily in the domain of identifying optimal sources of financing for the implementation of the energy transition and informing all stakeholders from the public administration about the potential benefits for their business.

4.3.3 Participating stakeholders

City of Opatija and City of Kastav

The development of ECASS tools takes place in cooperation with end users from partner cities. The initial versions of the tool are presented and in communication with them determines the validity of the design and possible improvements. The usability of the tool is tested on a framework of focus groups composed of potential users from multiple types of stakeholders.

The beneficiaries were determined by representatives of the cities of Opatija and Kastav, and actively participated in the workshops.

4.3.4 Approach

The identification of needs and the presentation of the tool was done through individual interviews with stakeholder representatives and through the implementation of workshops where Discover questionnaires were filled out.

All interactions were carried out on-site in direct communication because it was estimated that in this way better feedback could be obtained.

Two questionnaires prepared by IESDI were used, one for facilitators and one for customers, accompanied by corresponding consultations.

Facilitator Consultations:

Ongoing consultations involved key stakeholders, first with University of Rijeka – Centre for Smart and Sustainable cities addressing legal, technical, and financial aspects during March 2025. And second with Regional Development Agency of the Primorje-Gorski Kotar County during April 2025, where energy transition impact on municipality development was discussed and who advanced tools based on artificial intelligence could support planning processes. These meetings provided feedback essential for service development, improvements, relevance and practicality - ultimately an initial version of specifications for ECASS tool.

Customer Consultations:

Bez granica is facilitating four municipality-led CEPs (Rijeka, Opatija, Kastav and Delnice), gathering insights through meetings in Kastav (March 14, 2025) and Opatija (April 29, 2025). Feedback provided valuable information about what is relevant for our end users and their expectations from this type of tool. We also gathered information on their plans and commitments in the next period especially in improvement on data capture and digital twin's capabilities.

4.3.5 Summary of the stakeholders' feedback

The key problem is the lack of open data sets and easier access to data on energy consumption of future members themselves. Unfortunately, the situation in the Republic of Croatia is not favourable in this context (not even close to the available data in, for example, Italy or Austria).

In this context, it is proposed to lobby more actively and present the challenges faced by CEC promoters and organizers to the relevant ministries and to continue efforts to simplify business processes with the help of systems such as ECASS.

4.3.6 Areas of improvement

In the coming period, it is planned to optimize the application for mobile use, introduce multilingualism and improve the reporting and analytical system. Connection with systems for informing beneficiaries about sources of financing provided by PRIGODA is also potentially considered.

4.3.7 Conclusions

The app has already been introduced to WB users, and we have received very positive feedback from all parties, especially from the city of Opatija, which is our partner in the project for testing ECASS. Further improved functionality will follow during Q2/2025.

4.4 Stakeholder feedback summary - Bulgaria

4.4.1 Name of the new/advanced service

The service in Bulgaria is called **CEP Real Life Modelling (CEP - RLM)**

It is based on an in-depth analysis conducted within the framework of the project exploring the conditions for establishing Energy Communities in Bulgaria. The findings revealed a range of political, legal, economic, technical, and social barriers that the project promoters must overcome when initiating Community Energy Projects. The service to be offered by the One-Stop Shop (OSS) in Bulgaria is specifically designed to streamline this process with a targeted focus on the most pressing challenges – legal, technical and financial. It is structured in the following way:

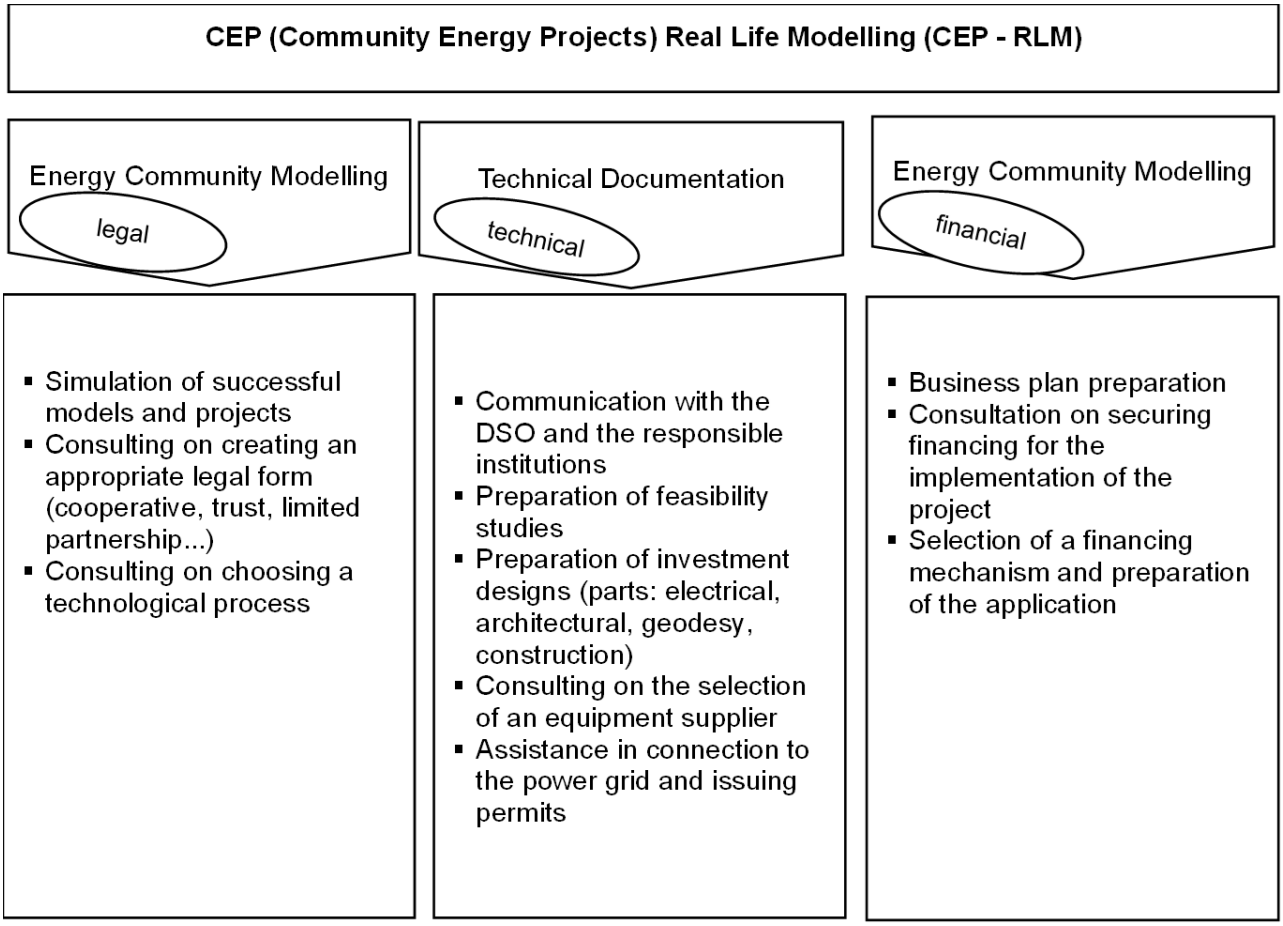

Figure 6: The service in Bulgaria - CEP Real Life Modelling

4.4.2 Main stakeholder

The main stakeholder who acts as a development partner together with IESDI and provides consultations throughout all stages of the development of the service is the **Chamber of Energy Communities in Bulgaria (CECB)**. CECB is an independent, democratic organization, dedicated exclusively to achieving energy independence for citizens and communities through specific legal and tecno-economic models. Its activities cover the promotion and development

of energy communities in Bulgaria using innovative smart grid technologies and social innovation. These models aim to address energy poverty and enhance the deployment of RES in the national building stock and industrial sector.

CECB's main role in the development and implementation of the service is – providing technical and legal expertise through all phases of the CEP project development.

4.4.3 Participating stakeholders

The stakeholders selected to participate in the consultation of the service fall into two main categories: **Facilitators** (providing professional expertise) and **customers** (municipalities, potential initiators of CEPs).

Facilitators

The facilitators consulted during the development of the service are among the leading and foremost actors in Bulgaria's renewable energy sector. **Their role** is to bring comprehensive and in-depth expertise across all relevant aspects of the service and are entrusted with providing critical, informed perspectives on each of its components throughout every phase of its development. These stakeholders include:

- **The Energy Efficiency and Renewable Sources Fund (EERSF)**. Established in 2004 in accordance with the Energy Efficiency Act, it manages the financial resources received by the Republic of Bulgaria from the Global Environment Facility (GEF) through the International Bank for Reconstruction and Development (IBRD) and from other donors. Its main efforts are concentrated in facilitating energy efficiency (EE) investments and promoting the development of a working EE market in Bulgaria. The Fund's main environmental objective is to support the identification, development and financing of viable EE projects, resulting in substantial reduction of greenhouse gases (GHGs).
- **Sustainable Energy Development Agency (SEDA)** – an executive agency within the Ministry of Energy. Its main purpose is to encourage the production and consumption of energy from renewable sources. Its main roles include monitoring compliance with energy efficiency laws, implementing EU energy directives, supporting renewable energy projects, and managing programs for renovating residential buildings to enhance energy efficiency and reduce energy poverty.

Customers

The municipalities engaged in CEP RLM consultation were selected based on preliminary analysis of their EE Plans, Plans for RES deployment and discussions during national energy conferences and EU project webinars. Several municipalities clearly expressed their commitment to accelerate the Green Transition and implement decarbonization measures developing Community Energy Projects. The most active amongst them are:

- **Municipality of Dryanovo.** Situated in the picturesque mountain region of Stara Planina Mountains, with a population of about 10 041 residents, it is known for its rich historical heritage and natural landscapes. Committed to sustainable development, Dryanovo actively pursues renewable energy initiatives and energy efficiency measures as integral elements of its local growth strategy, aiming to balance environmental stewardship with economic progress. It borders with Tryavna municipality with which they formed a cluster for mutual development of sustainable energy projects.

- **Municipality of Tryavna.** Located in the heart of Bulgaria with a population of approximately 11 834 residents, it is renowned for its rich cultural heritage, well-preserved National Revival architecture, and vibrant artisanal traditions. Nestled at the foot of the Stara Planina Mountains, the municipality integrates sustainable energy practices into its local development strategy, positioning itself as both a cultural landmark and a proactive leader in the energy transition.
- **Municipality of Chavdar.** Though modest in size, with a population of approximately 1 253 residents, it is a progressive administrative unit located within the Sofia Province. It is recognized for its proactive approach to sustainable development and environmental innovation. Situated in a mountain region, Chavdar has demonstrated a strong commitment to energy transition, with strategic initiatives aimed at promoting renewable energy, improving energy efficiency, and fostering community-led energy projects.

4.4.4 Approach

The stakeholder engagement approach has two primary objectives:

1. To evaluate the scope, structure, and professional design of the service components.
2. To assess the extent to which the service aligns with the needs and expectations of the target group – namely, the CEP initiators.

In line with these objectives, two distinct questionnaires were developed – one targeting **facilitators** and the other aimed at service recipients **(customers).** Correspondingly, two types of consultations were conducted.

1. Service consultation with Facilitators:

This process has been carried out across all phases of service development and will continue throughout the lifespan of the project and beyond, ensuring continuity as the service reaches full operational maturity.
The main stakeholder, **CECB**, played an active role in the co-design of the service, providing oversight of both legal and technical dimensions. Regular consultations were held – both virtually and in-person – with the service facilitators – **EERSF** and **SEDA**. These collaborative sessions covered all three core pillars of the service: legal, technical, and financial.
During a working meeting held on the 27th of March 2025, representatives from the main and facilitating stakeholders completed the respective questionnaires and participated in profound discussion of all aspects of the service. Their feedback was essential for ensuring the service's relevance, flexibility and feasibility. As a result of their insights, several suggestions were made regarding the general scope of the service. The overall design for planning the phases of a CEP has followed the General Guidebook, while in Bulgaria the sequence of the steps to prepare the investment documentation must be adjusted to the current amendments in the Spatial Planning Act, the Environmental Protection Act and the grid infrastructure. Furthermore, a simulation tool for financial modeling and business planning was considered a must and should be developed (or an existing one adapted by the Bulgarian OSS).

2. Service Consultation with Customers:

As part of the project outcomes, **IESDI** is responsible for supporting the establishment of four **Energy Community Projects (CEPs)**, with municipalities serving as the principal initiators. Preliminary discussions with the selected municipalities have already begun, integrating them into the service consultation process. Their feedback is crucial for structuring the service to effectively address the specific needs of the target group.

To date, IESDI has organized the following engagement activities with municipalities as part of the service consultation phase:

- **Meeting with the Municipality of Chavdar**, held at the IESDI office on **13 March 2025**. During the meeting, the respective questionnaires were completed, and the mayor shared valuable insights regarding the specific types of support the municipality would require initiating CEPs.
- **Workshop in Dryanovo**, conducted on **3 April 2025** which brought together participants from the cluster municipalities of **Dryanovo and Tryavna**. The session featured active discussions, and participants completed the relevant questionnaires.

The input gathered from these interactions provided valuable direction for the following refinement of the service. One of the most significant observations was that the current service design focuses primarily on supporting **photovoltaic (PV) community energy projects**. However, municipalities identified the potential and need for **mixed-type community energy projects**, incorporating technologies such as **heat pumps and biomass-based energy solutions**.

4.4.5 Summary of the stakeholders' feedback

The service testing process yielded several important insights, based on feedback from both facilitators and potential end users (customers). These findings are instrumental in shaping the final structure and scope of the service:

1. **Insights from Facilitators** *(CECB, EERSF, and SEDA)*
   - In Bulgaria the sequence of the steps to prepare the investment documentation must be adjusted to the current amendments in the Spatial Planning Act, the Environmental Protection Act and the grid infrastructure.
   - A simulation tool for financial modeling and business planning was considered a must and should be developed (or an existing one adapted by the Bulgarian OSS).
2. **Insights from Municipal Customers** *(Municipality of Dryanovo, Municipality of Tryavna, and Municipality of Chavdar)*
   - There is a clear demand for the service to accommodate mixed-type community energy projects, beyond its initial focus on photovoltaic (PV) systems. Municipal representatives emphasized the need to incorporate technologies such as heat pumps and biomass-based energy solutions, reflecting the diversity of local resources and priorities.

4.4.6 Areas of improvement

- Adjustment of the investment documentation in accordance with the recent amendments to the relevant legal framework, including the Spatial Planning Act, the Environmental Protection Act, and regulations governing grid infrastructure.
- Envisaging, or building upon an existing simulation tool for financial modelling and business planning
- Support of mixed-type community energy projects – to be considered for the further development of the service

4.4.7 Conclusions

The service was well received by both facilitators and customers. The feedback collected during the consultation process will be integrated into the final design. The most recent legal regulations governing the investment process will be thoroughly reviewed, with a particular focus on the latest amendments related to Community Energy Projects (CEPs). Opportunities to incorporate a simulation tool for financial modelling and business planning will also be assessed – this may involve enhancing an existing, well-performing solution. The facilitation of mixed-type community energy projects will be given due consideration in the next phases of service development, to ensure the service is adaptable to various local contexts and aligned with the specific needs and resources of the municipalities. Additionally, opportunities for scaling up DISCOVER project, incorporating modelling of mixed-type energy community projects will be explored.

5 Conclusion

As a result of an in-depth analysis, the services which each OSS will offer have been identified in WP 3, as follows:

- **OSS Paris Region, France**: Analysis of opportunity for PV projects – technical, economic, and legal dimensions
- **OSS Province of Teramo, Italy**: Preliminary Technical – Economical Assessment for CEPs
- **OSS Primorsko-Goranska County, Croatia**: Energy Community Analysis and Simulation Services – ECASS
- **OSS Sofia region, Bulgaria:** CEP Real Life Modelling (CEP - RLM)

Within T4.1 the above services have been broadly consulted with stakeholders to evaluate their applicability and adjust them to best cover the target needs.

The stakeholder feedback was collected following a unified methodology adjusted to the local contexts by the partners. This included designating a main stakeholder as a development partner actively involved in all service development phases. Supporting this, a wider group of stakeholders – facilitators (experts) and customers (municipalities or condominiums) – provided feedback. Stakeholders were engaged through questionnaires and a variety of feedback channels, enabling continuous dialogue and iterative improvement of the services. Their input confirmed that the services are generally well received and offered concrete suggestions for refinement to ensure they align with both professional standards and user needs. Feedback across France, Italy, Croatia, and Bulgaria revealed common priorities such as improving usability, legal alignment, and adaptability, as well as region-specific needs.

In **France**, the focus was on improving integration of architectural, legal, social, and language aspects to make the tool more modular and versatile. In **Italy**, users valued the service for early CEP decision-making and suggested a more user-friendly interface, simplified assessments, and broader financing options. **Croatia** identified a lack of open energy data as a major barrier and called for better data access, mobile optimization, multilingual features, and funding links. In **Bulgaria**, stakeholders highlighted aligning the service with recent legal amendments, enhancing simulation tools, and expanding support for mixed-type energy communities to ensure long-term sustainability.

These shared insights, along with specific regional recommendations, will be integrated into the final design of the services. This approach aims to create flexible, user-oriented services that respond to local challenges while empowering stakeholders - such as municipalities, condominiums, and technical facilitators – to effectively initiate and manage CEPs.

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