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D4.1 CLASSIFICATION OF ORGANISATIONAL FORMS FOR COLLECTIVE AND COOPERATIVE ENERGY SUPPLY AND THEIR TYPICAL BUSINESS MODELS



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EXECUTIVE SUMMARY

Context:

One-Stop-Shops and national advisory bodies are confronted with the emergence of many new energy communities with different objectives and many unanswered questions about business models and organizational forms. However, the advisory institutions themselves often lack high-quality material when it comes to advising on business models and organizational forms. There are simply still few clear descriptions and guidelines on how to classify and categorize the purposes of energy communities. There are also still few instructions and examples on business models, the possible organizational (legal) forms, and their combinations.

Problem:

Energy communities struggle due to a lack of guidelines and qualitative consulting activities. Some of them fail due to a lack of understanding of elementary success factors that have not been taken into account. Others have good business ideas but do not see the big picture or the opportunities to combine the idea with other goals and purposes. Still, others have difficulty choosing and developing robust, sustainable business models and organizational forms that fit together. Developing financial and timeline plans is not considered a problem but a necessary aspect to concretize the business models and organizational forms.

Objective:

This deliverable aims to present a Support Document (Chapters 2-5 of this deliverable) containing an overview and description of the basic success factors, classification of purposes, business models, and organizational forms for energy communities. This document will serve as a tool for the OSSs in their advisory activities. The OSSs and their pilot energy communities critically evaluated the relevance of the Support Document and provided feedback for improvement. Moreover, this deliverable presents screenshots and structures of Excel tools for a "Financial Plan Template" and a "Timeline Template". These tools provide additional assistance for energy communities to develop their own 5- to 10-year business plans but do not claim to contain new business knowledge. The financial planning and time planning build on the business model and organizational form developed with the Support Document.

Support Document:

The Support Document begins with general success factors for energy communities. It attempts to identify fundamental aspects of success that form the basis for all types of energy communities. The document contains a comprehensive list of 19 basic success factors, such as common purpose/mission, community engagement, effective communication, and a clear definition of project constraints.

In the next chapter, the Support Document attempts to clarify the different nature of energy communities by classifying the different purposes. The document identifies and describes ten purpose categories, such as collective generation and trading, collective self-consumption in different variants, and collective investment and financial aggregation.

Moreover, the Support Document shows versions of business models for each purpose class using the Business Model Canvas format. The presented Business Models Canvas for each purpose class contains a list of elements that could be relevant. This list of elements can be seen as a checklist to consider when developing specific concrete business models. In addition, possible combinations of business models are discussed.

In parallel, organizational (legal) forms that could be suitable for energy communities are sought. All possible organizational/legal forms are listed and discussed. However, the document remains rather theoretical, as the legal framework and the implementation of the regulations in the individual Member States differ considerably. The document tries to keep the content general enough to be valid for each Member State. The legal implementation of these organizational forms must therefore be analyzed in detail for each Member State. This chapter also discusses the compatibility of the various business models and organizational forms.

Application of Support Document – developing Business Strategies

Various business strategies were discussed with the OSSs and pilots, feasible models were selected for implementation, and the relevance of the Support Document was assessed with a "Feedback Template". The Support Document guided the pilots to critically reflect on their strategies and to identify and consider important hidden aspects of their business model. The organizational forms and business models in the Support Document

have been improved based on the feedback from the pilot activities and will be further improved by the results of the multi-dialogue in further work of the project.

Business Plan including Financial Plan and Timeline Plan:

Based on the business models and organizational forms that can be developed with the help of the Support Document, the next step for all possible energy communities is to develop 5- and 10-year business plans. These business plans include a financial plan and a timeline plan. The Excel tools developed in ECOEMPOWER, namely “Financial Plan Template” and “Timeline Plan Template”, are simple tools to support the development of these aspects. The financial plan includes a revenue plan, costs plan, investment plan, financing plan, liquidity (cash-flow), and profit & loss plan. The tools contain formulas that facilitate the calculation and visualization of those plans. These tools include a quick overview, descriptions, and examples but are kept simple and general as financial planning and time planning are standard business procedures. People with standard business or management backgrounds will have similar tools. No new knowledge is created in those templates but they should be considered as additional support.

OSSs can use these templates to clarify with interested to-be-established energy communities if financial plans and timeline plans of this quality already exist. Otherwise, new energy communities can use the tools to develop their financial and timeline plan but do not need to use them necessarily. Depending on the situation of the new energy communities it is clear that it might be more difficult for starting energy communities to estimate all requested numbers. Especially new energy communities will need some time to concretize their financial planning because it is being built in parallel to all other internal structures and therefore still confronted with many uncertainty factors.

Moreover, a workshop was conducted to clarify remaining questions and to further support the pilots with the usage of those tools.

Conclusion:

The developed Support Document was feedbacked by the project’s OSSs and pilot sites to be a useful tool for developing, critically reflecting on, and improving their business models and organizational forms. All pilots were asked to fill out templates based on the Support Document to present their business case. The Support Document was able to inspire the pilots to expand and restructure the purpose or combination of purposes. The business models in canvas format provided a comprehensive list of elements that new energy communities need to consider for business strategies. In addition, the pilots appreciated the list of basic success factors, which highlights important aspects of establishing an energy community. The listing and description of organizational forms were useful but limited in their national application, as national laws and their regulatory frameworks differ considerably between Member States. It is ongoing work in the project to create an overview of legal frameworks for each Member State. The provided Excel tools for financial planning and timeline planning are considered useful instruments to concretize 5- and 10-year business plans.

The Support Document and the Excel tools for financial and timeline planning can be used by One-Stop-Shops as tools for advisory activities with new and existing energy communities. The Support Document and the Excel tools should not only be used within the projects but also help actors and projects outside ECOEMPOWER to develop their business models, organizational forms, financial and timeline plans.

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1 Introduction

The EU Green Deal strategy places energy communities as one of the central topics of its agenda, recognizing their potential to reduce greenhouse gas emissions swiftly and significantly. By 2050, it is envisioned that half of the European Union citizens could independently generate their electricity, meeting 45% of the EU's energy demand (Delft, CE Delft, September 2016). The key to unlocking this potential lies in robust local actions and initiatives owned by citizens. In this context, the ECOEMPOWER project emerges driving the establishment and growth of energy communities in the Czech Republic, France, Germany, Greece, and Italy.

Energy communities engage in joint generation and supply, energy sharing, energy services, and even cooperative electro-mobility, all contributing to social and community empowerment. The benefits of such collective energy initiatives are multifaceted, encompassing strong environmental advantages, heightened public acceptance of renewable installations, diminished energy poverty, improved social cohesion, energy autonomy, access to innovative financing schemes, and the provision of distributed flexibility to enhance energy network resilience. Despite these benefits, the widespread establishment of such communities necessitates capacity building and empowerment efforts, acknowledging that this model is innovative and requires support for its proliferation.

The ECOEMPOWER project actively promotes and supports the creation of local offices (One Stop Shops; short: OSS) dedicated to facilitating the setup and development of energy communities. It is the aim of the project to propose ways to establish both the energy communities as well as the OSSs in ways to be long-living and can serve as examples for being followed.

1.1 Objectives of the work reported

With regard to the classification of organizational forms and their typical business models for collective and cooperative energy supply, the work done in Task 4.1. was to develop a Support Document that describes organizational and business forms for cooperative organizations. The business models will be described using the Business Model Canvas methodology.

One Stop Shops can use this document as a tool for consulting activities with new and existing energy communities. This Support Document presents different ways in which a business case for energy communities can be built. The document provides an overview and description of basic success factors, classification of purposes, business models and options for organizational forms. The document can not only be used within the projects, but also help stakeholders and projects outside ECOEMPOWER to develop their business models and organizational forms.

Various business strategies were discussed with the pilots and feasible models selected for implementation. The Support Document provides guidance to critically reflect on their own strategies and identify and consider important hidden aspects of the business model. Together with each pilot, the leaders of Task 4.1 should develop organizational and business strategies for a local energy community.

The relevance of the document and the different models were assessed by OSSs and pilots. The organizational forms and business models in the Support Document will be improved based on the feedback from the pilot activities and the results of the multi-dialogue in T4.4.

1.2 How to read this document

This document is designed to be read independently of other deliverables. This document is not only a project report but can also be used outside the project by other persons and projects dealing with success factors, purposes, business models and organizational forms for energy communities.

Chapters 2-5 of this deliverable represent the Support Document often mentioned in this report. Starting with general success factors for energy communities in chapter 2, the Support Document tries to find the fundamental aspects which form the base of success for all kind of energy communities. In chapter 3 the document tries to show the different nature of energy communities by providing a classification of various purposes and combination of these classes. Chapter 4 shows business models for each purpose class using the business model canvas format. Parallel in chapter 5 the document looks at organizational (legal) forms which could fit energy communities. In the same chapter the paper discusses the match of various classes and organizational forms. Chapters 4 business models and chapter 5 organizational forms can be read parallel because they do not necessarily depend on each other. Each purpose class could theoretically be realized by each organizational form and vice versa. However, this often does not always make sense. Good and bad matches are explained in chapter 5.2. Chapter 6 gives overviews of how tools for financial and timeline planning can look like for developing business plans.

2 Success Factors for collective and cooperative energy supply and Energy Communities

Success factors for energy communities are multifaceted and depend on various aspects such as the community's goals, local context, regulatory environment, and the specific business model adopted. The following list provides some crucial success factors which are generally applicable to energy communities. This list does not contain negative factors or risk factors because in most cases they are the opposite or failure of the success factors. Various papers (Ahlemeyer, Griese, Wawer, & Siebenhüner, 2022), (Zardi, 2015) and internal discussions contributed to this list. Each factor has a brief description and an explanation of why it is important.

1. Joint Purpose, Mission

- **Description:** Establishing a clear and shared purpose, mission, and set of goals to align the expectations and aspirations of all community members. This involves defining the core values and the overarching reason for the community's existence. Defining the purpose is the basis for the classification of ECs presented in Chapter 3. Furthermore, it is necessary that the community regularly assess that this vision is still shared among its members. It is necessary to keep this joint vision all along the community's lifetime.
- **Importance:** Setting a joint purpose and mission is the foundational step to cultivate a unified sense of direction among community members. It ensures that everyone is on the same page, fostering cohesion and commitment. A well-defined mission acts as a guiding beacon, helping the community navigate challenges and make collective decisions that resonate with its core values. This shared vision enhances collaboration and resilience, contributing to the long-term success and sustainability of the energy community.

2. Values

- **Description:** Clearly defining and articulating the core values that guide the behaviors, decisions, and culture within the energy community. Values encompass ethical principles, sustainability commitments, and the shared beliefs that underpin the community's identity.
- **Importance:** Defining values serves as the ethical compass for the energy community, establishing a moral framework that guides decision-making and actions. Values create a shared identity and culture, fostering a sense of belonging and shared responsibility among community members.

3. Legal and Organizational Structure

- **Description:** Selecting an appropriate legal and organizational form that aligns with the community's goals, suits the community's nature (profit or non-profit), and regulatory requirements.
- **Importance:** The right structure ensures legal compliance, governance, and operational efficiency.

4. Choice of the Business Model or Combination of Business Models

- **Description:** Choosing business models that align with the community's objectives and combining models for synergies.
- **Importance:** Proper business model selection ensures effective implementation and utilization of resources.

5. Financial Viability

- **Description:** Developing sustainable financial models that ensure the economic feasibility of energy projects. Choosing internal tariff models that resonate with the community's objectives and adequately reflect costs and benefits/revenues of the selected business models.
- **Importance:** Financial viability is crucial for the community's ability to attract investors, secure funding, and cover operational costs.

6. Technological Infrastructure

- **Description:** Implementing robust and reliable technological solutions, such as monitoring systems, blockchain, or smart grid technologies, energy management systems.
- **Importance:** Advanced technology enhances the efficiency, transparency, and overall performance of energy community operations and acts as an enabler for different business models.

7. Collaborative Partnerships and Stakeholder Management

- **Description:** Establishing partnerships with local authorities, grid operators, technology providers, SMEs and other relevant stakeholders. Managing relationships with external actors in the community's environment.
- **Importance:** Collaborative partnerships can provide support, resources, and expertise, contributing to the success of energy community projects. Positive interactions with external actors enhance the community's reputation.

8. Number of Members

- **Description:** Evaluating the critical mass of members required for effective community functioning. Important is the distinction between passive members which contribute to the network and active members which run the daily activities.
- **Importance:** Membership numbers impact the community's influence, resource pool, and ability to achieve collective goals.

9. Clear Definition of Voting Rights (Restrictions)

- **Description:** Clearly defining the parameters and limitations of voting rights within the community. This might be connected to point 2 - legal structure. Voting rights are generally described within the status.
- **Importance:** Clarity in voting rights ensures a fair and transparent decision-making process, preventing conflicts and promoting equity.

10. Clear Definition of Project Constraints

- **Description:** Explicitly outlining the limitations and constraints that may affect the community's projects.
- **Importance:** Clear project constraints provide a realistic framework, helping the community manage expectations, plan effectively, and navigate challenges.

11. Adaptability

- **Description:** Being flexible and adaptable to changes in technology, regulations, and community needs. This can involve agile internal organizational structures and the establishment of change management/change culture.
- **Importance:** Flexibility allows energy communities to navigate evolving landscapes and seize new opportunities.

12. Social and Environmental Impact

- **Description:** Incorporating social and environmental considerations into the community's goals and operations.
- **Importance:** Emphasizing positive social and environmental impacts enhances the community's reputation and contributes to broader sustainability goals.

13. Professional Support During Foundation

- **Description:** Leveraging professional support during the founding phase and if necessary even afterwards.
- **Importance:** Professional support can provide expertise, guidance, and increase the chances of a successful foundation.

14. Professional Management

- **Description:** Implementing professional management practices, considering diversity and interdisciplinary aspects.
- **Importance:** Effective management ensures streamlined operations, diversity of thought, and adaptability.

15. Staffing

- **Description:** Addressing key staffing aspects such as team layout, size, and roles with an interdisciplinary team approach.
- **Importance:** Proper staffing contributes to the community's operational efficiency, innovation, and goal achievement.

16. Community Engagement

- **Description:** Actively involving community members in decision-making processes, fostering a sense of ownership and commitment.
- **Importance:** Engaged communities are more likely to support and sustain energy projects, leading to long-term success.

17. Incentive Systems

- **Description:** Creating a fair, sustainable incentive system between members and stakeholders. Economic incentives (include monetary costs and benefits), social incentives (activities to gain reputation, honour, comply and avoid social pressure,..), intrinsic incentives (moral values, fairness, altruism – willingness to do something “good”,...) This includes the setup of internal tariff models when sharing energy.
- **Importance:** Incentive systems play a crucial role in fostering collaboration, motivation, and a sense of shared purpose within the community.

18. Effective Communication

- **Description:** Implementing clear and transparent communication strategies with community members, stakeholders, and the public.
- **Importance:** Communication builds trust, addresses concerns, and ensures that the community is well-informed about projects and decisions.

19. Education Awareness

- **Description:** Providing education and raising awareness about renewable energy, energy efficiency, and the benefits of community involvement.
- **Importance:** Informed and aware community members are more likely to actively participate and support energy projects.

These success factors collectively contribute to the resilience, sustainability, and positive impact of energy communities, fostering their long-term success. However, the relevance of each point may depend on the specific context and goals of the energy community in question.

3 Purpose classes for collective and cooperative energy supply and Energy Communities

Success Factor Number 1 in the previous chapter suggests to define a clear purpose. The DECIDE project provided the base structure of the following classification of purposes (DECIDE, 2023). This chapter tries to further develop the clear distinction between classes and a better description of those. Other papers (Tuerk, Neumann, Matowska, Rakocevic, & Karg, 2023), (Peeters, Protopapadaki, Van Dijk, & Van Damme, 2023), (Protopapadaki & Peeters, 2022), (REScoop.EU, 2023) provided many important aspects.

The following figure presents the ten purpose classes. The order of the classes is based on the order of the mentioned DECIDE project document. Classes 1-6 are primarily about the movement and storage of energy in various scenarios. Classes 7 and 8 focus primarily on financial aspects and classes 9 and 10 present important other activities that do not fit into previous classes.

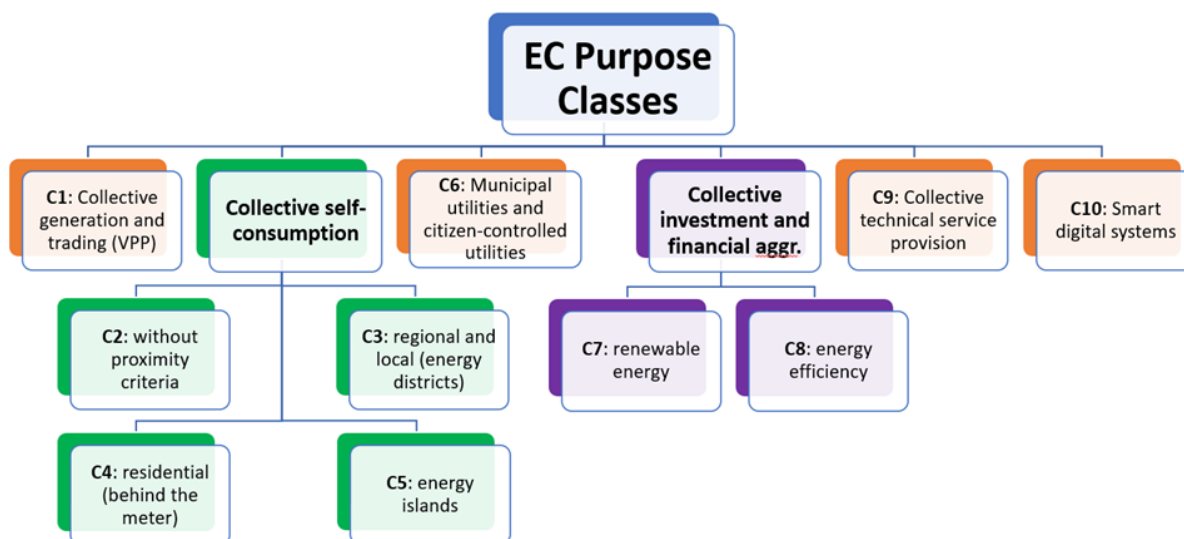


Figure 1: Purpose classes for energy communities

No	Name	Description
Class 1	Collective generation and trading of renewable energy	<p>All types of territorial or commercial groupings of generators of renewable electricity and renewable heat – whether active on the market or under feed-in mechanisms.</p> <p>Types of renewable electricity sources (e.g., solar, wind, water) Types of renewable heat sources (biomass, biogas, CHPs)</p> <p>Implementation and management of one or multiple energy generation facilities aiming to sell the energy or flexibilities on local or national energy markets or to the supplier/DSO by injecting to the grid for a set price.</p> <p><u>Purpose:</u> Focus on selling renewable energy. Operators are primarily interested in maximizing profits by selling. This model is quite popular among wind and PV plants.</p> <p><u>Condition:</u> focus on producing and trading of energy, not on self-consumption. However, an EC can combine this class with other classes which focus on self-consumption. Then the purpose must be defined clearly.</p> <p><u>Example:</u> Wind and PV plants - EcoPower CVBA, BocagEn (Belgium)</p>
Class 2	Collective self-consumption – without proximity criteria	<p>Energy from a closed group of generators and consumers - not necessarily in proximity (but including local or regional energy markets). Certified/guaranteed sourcing: consumers in the community know for sure that the energy was generated in the community and by whom. Primarily electricity due to the not existing proximity criteria. For local and regional energy markets this would include heat and not only electricity.</p> <p>No financial benefits like tax and fee reduction for the grid due to non-proximity of generation and consumption.</p> <p><u>Purpose:</u> enable energy trading among members; improve power of citizen to produce and consume; focus on energy consumption within the community</p> <p><u>Condition:</u> no proximity criteria for energy production and consumption units</p> <p><u>Example:</u> Ourpower (Austria), pilots of the Compile project, somenergia (Spain); Examples of legal implementation: Bürgerenergiegemeinschaft (Austria), Regionalstrom (Germany)</p>

<p>Class 3</p>	<p>Collective self-consumption – regional and local</p>	<p>Regional and local mean 1) renewable electricity exchange at medium and low voltage levels, 2) renewable heat exchange with reasonable distance between producer and consumer.</p> <p>Region, quarter, area, districts with residential and/or business entities operating part of their energy supply systems under their own regime. Geographically delimited.</p> <p><u>Purpose:</u> promote regional self-consumption, keep electricity at lower voltage levels, increase decentralization and resilience of energy system, ensure energy price stability</p> <p><u>Conditions:</u> Proximity criteria: Distribution and sub-distribution networks, medium and low voltage lines, non-transmission networks and high voltage lines</p> <p><u>Example</u> of legal implementation: local and regional REC (Austria)</p>
<p>Class 4</p>	<p>Collective self-consumption -residential</p>	<p>Jointly producing, storing and using locally produced (renewable) energy. All under one connection point to the grid (i.e. behind the meter; including multi-tenant buildings); generation, storage and consumption of electricity and heat in residential/house internal cases (e.g. multiple apartments in one apartment building, multi-office building with solar panels on rooftop); cooperations could form: contract only (1) or a legal entity (2): (1) internal contract</p> <p><u>Example:</u> Mieterstrom-Modell (Germany), GEA Gemeinschaftliche Erzeugungsanlage (Austria) - both don't classify as energy community because of missing legal entity</p> <p>(2) legal entity would qualify to count as energy community but would bring no advantages where system like Mieterstrom or GEA already exist</p> <p><u>Purpose:</u> Keep electricity outside of the public grid to reduce necessity of grid expansion at lowest level</p> <p><u>Conditions:</u> Proximity criteria: below one grid access point (all tenants are covered by one common utility meter); no companies</p> <p><u>Example</u> of legal implementation: Quartierstrom, Mieterstrom (Germany); Gemeinschaftliche Erzeugungsanlage (Austria)</p>
<p>Class 5</p>	<p>Collective self-consumption - energy islands</p>	<p>Real islands or parts of the distribution system that can be operated standalone.</p>

		<p><u>Purpose</u>: improve energy security, improve coordination among partners, promote participation in energy provision</p> <p><u>Condition</u>: (partial) disconnection to energy grid, independently functional energy system</p> <p><u>Example</u>: TILOS, Greece, cellular system as in SINTEG, holonic model as in PolyEnergyNet</p>
Class 6	Municipal utilities and citizen-controlled utilities	<p>Ownership of local grid/microgrid, Being the local energy supplier.</p> <p>Organizations for energy production, supply and grid operation under citizens’ control – directly (e.g. if operated as cooperative) or indirectly (e.g. if controlled by local government/municipality);</p> <p>Because they are “citizen owned” and have a legal entity, they classify as EC.</p> <p><u>Purpose</u>: municipal utilities under citizen control promotes decentralized energy system, increase citizen engagement, customer retention, unlocking private capital for capacity expansion</p> <p><u>Condition</u>: citizens’ control – directly (e.g. if operated as cooperative) or indirectly (e.g. if controlled by local government); Municipal utilities are required to focus on renewable energy sources and should involve citizens in decision-making processes to qualify as energy community.</p> <p><u>Example</u>: ElektrizitätsWerke Schönau eG (EWS), Hindelang coop stadtwerke (Germany)</p>
Class 7	Collective investment and financial aggregation – Renewable Energy	<p>A “community” of investors jointly invest in projects for renewable energy production. The energy community doesn’t need to be involved in the implementation of projects. It acts as financial partner. External investors don’t necessarily need to be part of the energy community. For instance, the EC can also run a platform which acquires and bundles investors (crowdfunding).</p> <p>This also includes sale-and-lease-back model for a PV for example.</p> <p><u>Purpose</u>: Facilitate investment in energy transition, Mobilize financial means, channel money to green/impact investment</p> <p><u>Condition</u>: renewable energy or energy efficiency projects, criteria for the type or scale?</p>

		<p><u>Example:</u> Crowdfunding green-energy projects (e.g., GoParity, Crowdspace, zenob)</p>
<p>Class 8</p>	<p>Collective investment and financial aggregation - Energy Efficiency</p>	<p>Energy community supporting energy efficiency projects:</p> <ol style="list-style-type: none"> 1) Financial: a “community” of investors jointly finance projects for energy efficiency means/measures/actions, together with regional SMEs and municipalities. Financing of projects can be sourced from outside of the community (e.g. contracting / ESCO). The EC can also run a platform which acquires and bundles investors (crowdfunding). <p>This class could further include:</p> <ol style="list-style-type: none"> 2) Theoretical: Services can include energy auditing, measures planning, consulting, monitoring 3) Physical: measures can be building insulation, passive homes and buildings, heat pumps, etc. <p><u>Purpose:</u> Facilitate energy efficiency projects, mobilize financial means, channel money to green/impact investment.</p> <p><u>Condition:</u> energy efficiency projects, criteria for the type or scale?</p> <p><u>Example:</u> BEC program (Ireland. Using SEAI funding)</p>
<p>Class 9</p>	<p>Collective technical service provision</p>	<p>All types of commercial groupings of energy services not related to building efficiency.</p> <ul style="list-style-type: none"> -Mobility: grouping of EV charging stations, collective ownership of mobility resources, collective financing of H2 charging stations -Flexibilities: demand side management services -Energy management (in combination with digital solutions from class 10) -Storage: collective (e.g. grid-connected) energy storage <p><u>Purpose:</u> Service provision to the energy transition</p> <p><u>Condition:</u> clear distinction to energy production & consumption</p> <p><u>Example:</u> Restore Energy in the Netherlands (https://restore.energy/nl/utilities/)</p>

<p>Class 10</p>	<p>Smart digital systems</p>	<p>All types of digitally controlled energy systems (e.g. implemented with blockchain). Digital energy supply and demand response systems (technology driven models).</p> <p>Digital Platforms: Leveraging digital technologies, such as blockchain, for transparent and efficient energy transactions.</p> <p>Members may engage in peer-to-peer energy trading through digital platforms.</p> <p>Smart Grid Integration: Utilizing smart grid technologies for better control and optimization of energy resources.</p> <p>Enables real-time monitoring and management of distributed energy assets.</p> <p>Flexibilities: aggregation of demand side management services</p> <p><u>Purpose:</u> Facilitate digital service provision, empowering digital solutions for energy transition</p> <p><u>Condition:</u> digital elements</p> <p><u>Example:</u> MéryGrid Belgium (smart energy grid), residential flexibility aggregation include TIKO, ThermoVault and domX</p>
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4 Business models for collective and cooperative energy supply and Energy Communities

4.1 Business Model Canvas (BCM)

Chapter 4 provides business model templates for each purpose class in chapter 3. The business models are shown in the business model canvas format (BMC).

This chapter commences by introducing a standard Business Model Canvas table as an illustrative example. The BMC serves as a framework for conceptualizing and presenting business models in a structured format. It consists of nine key elements, each encapsulated within its box, crucial for elucidating a business model comprehensively. Within the provided BCM template below, pertinent questions and considerations are already outlined, facilitating the completion of the canvas. There exists no rigid sequence for populating the template; however, we suggest commencing with the Value Proposition and Customer Segments, followed by Customer Relationships and Channels. Subsequently, attention can be directed towards Key Resources, Key Activities, and Key Partnerships, before concluding with Revenue Streams and Cost Structure.

Then, the mentioned BCM templates for each purpose class in chapter 3 are presented. The business models provide various elements which could be relevant but not all elements are necessarily relevant for one specific case. This list of elements should be seen as an inspiration to consider all kinds of aspects when designing the business model canvas for one individual situation.

Moreover, combinations of business models are discussed because an energy community may follow multiple purposes at the same time (chapter 3). Finally, this chapter presents concepts for internal tariff models. This may be especially relevant for energy communities with self-consumption.

To describe your own BMC, find the BMC template that corresponds to your purpose class, pick relevant elements, and ignore other elements. If your energy community follows multiple purposes, the creation of your own BMC will require elements of different BMC templates. It will result in a combination of the following BMC and its elements.

The elements from the following business models are a combination of various papers (DECIDE, 2023), (Peeters, Protopapadaki, Van Dijk, & Van Damme, 2023), (Protopapadaki & Peeters, 2022), (Bluhm, Hein, Golla, Henni, & Weinhardt, 2023), (Energy Community Repository, 2023), (REScoop.EU, 2023) but also includes own thoughts and internal discussions.

Example:

Designed by:

Date:

Version:

Business Model Canvas

Key Partners

Who are the EC's most important partners? These are **stakeholders that are involved** with energy communities but **are not their members** or shareholders.

These can include: municipalities, DSOs, service or technology providers, housing associations, aggregators, Supplier, local government, ESCO, NGOs, building managers, refurbishment companies

MOTIVATIONS FOR PARTNERSHIPS: Optimization and economy, Reduction of risk and uncertainty, Acquisition of particular resources and activities

Key Activities

What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?

CATEGORIES: Production, Problem Solving, Platform/Network

Activities can only be realized if appropriate regulations are in place

Key Resources

What Key Resources do our Value Propositions require? Customer Relationships Revenue Streams?

TYPES OF RESOURCES: Physical, Intellectual (brand patents, copyrights, data), Human, Financial

For ECs: Human capital, unused space, decentralized technologies, Software and hardware, etc.

Staff: What kind of staff (employed or under contract) is at hand for the entity to achieve its mission?

Value Propositions

What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?

CHARACTERISTICS: Newness, Performance, Customization, "Getting the Job Done", Design, Brand/Status, Price, Cost Reduction, Risk Reduction, Accessibility, Convenience/Usability

For ECs: Economic value
Environmental value
Social value

Customer Relationships

Internal: How does the EC internally operate? → Governance of the community membership, e. g. REC, CEC, Cooperatives (voting rights, level of communication etc.)

External: What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How costly are they?

Channels

Internal: Through which Channels do the EC's members communicate?

External: Through which Channels do our customers want to be reached? How are we reaching them? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?

Customer Segments

Internal: Members or shareholders of the community. This can be households, SMEs, municipalities, regional bodies; Also a geographical distance could be described, e. g. citizens living in the geographical area.

The involved actors also benefit somehow from the community and therefore are also considered costumers.

External: For which external people is the EC creating value?
Is our customer base a Mass Market, Niche Market, Segmented, Diversified, Multi-sided Platform?

Cost Structure

What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive? Is the BUSINESS PURPOSE more Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing), or Value Driven (focused on value creation, premium value proposition).

SAMPLE CHARACTERISTICS: Fixed Costs (salaries, rents, utilities), Variable costs, Economies of scale, Economies of scope

ONE-OFF investments or RECURRING costs like operating costs

Revenue Streams

For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?

TYPES: Asset sale, Usage fee, Subscription Fees, Lending/Renting/Leasing, Licensing, Brokerage fees, Advertising
FIXED PRICING: List Price, Product feature dependent, Customer segment dependent, Volume dependent
DYNAMIC PRICING: Negotiation (bargaining), Yield Management, Real-time-Market

4.1.1 Class 1: Collective Generation and Trading of Renewable Energy

Example: Wind and PV plants - EcoPower CVBA, BocagEn (Belgium)

1. Customer Segments:

- Internal:
 - Members or shareholders (citizens, SMEs, municipalities, regional bodies)
 - Voluntary open membership and democratic control
- External:
 - Energy buyers in regional and wholesale energy markets
 - Energy supplier
 - DSO (Distribution System Operator)

2. Value Propositions:

- Economic Value for Members:
 - Collective generation and storage
 - Provision, maintenance, and operation of metering equipment
 - Legal entity provides the opportunity for members to sell energy collectively, acting like a virtual power plant
 - Enhanced negotiation power with larger energy amounts
 - Financial return to internal investors
- Economic Value for Externals:
 - Collective/aggregated external trading of renewable energy
- Social Value:
 - Fair pricing, community support
- Environmental Value:
 - High share of renewable energy sources, carbon footprint reduction

3. Channels:

- Internal communication channels for member participation
- External channels for collaboration with partners
- Ways to attract new members

4. Customer Relationships:

- Dry - primarily focused on larger players as consumers

5. Key Activities:

- Found legal entity to act as an energy provider
- Installation, operation, and management of one or more (collective) (renewable) electricity or heat generation assets
- Financing generators (equity and debt capital)
- Focus on generation and trading of energy, not on self-consumption. However, an EC can combine this class with other classes which focus on self-consumption. Then the purpose must be defined clearly.
- Return money to members

6. Key Resources:

- RES for electricity / heat generation
- Technologies for generating and storing electricity and/or heat (renewable sources)
- Grid connection
- Virtual power plant for aggregating capacities
- Space for generators, land-use agreements or permits

- Investment capital
- Digital systems for optimization of generation (energy management systems)
- ICT system to track internal energy and money flows

7. Key Partners:

- Technology providers for generators
- Plant operator
- District heating system operator
- Maintenance firms for generators
- Grid providers
- ICT system provider
- Regulatory Compliance Consultants
- Flexibility market operator
- DSOs

8. Revenue Streams:

- Remuneration from selling electricity to the market (minus tax)
- Membership fees
- Pricing system dependent on flexibility of production: high flexibility allows higher profits in a dynamic price model.
- Grants and Subsidies: national and European fundings for sustainability goals.
- Efficient distribution of revenues: a significant share returns to investors as ROI in the form of profits, dividends, or interests

9. Cost Structure:

- One-Off Costs:
 - Investments in generators/power plants, storages (batteries)
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting)
 - Costs for buildings and production area: rent, space rent, energy costs, heating,..
 - Operational costs (energy management system, trading platform)
 - Energy production costs
 - Grid charges, taxes, and fees
 - Maintenance costs of equipment

4.1.2 Class 2: Collective Self-Consumption – Without Proximity Criteria

(no proximity criteria between generation and consumption units)

Example: Ourpower (Austria), pilots of the Compile project, [somenergia](#) (Spain); Examples of legal implementation: Bürgerenergiegemeinschaft (Austria), Regionalstrom (Germany)

1. Customer Segments:

- Internal:
 - Members or shareholders (citizens, SMEs, municipalities, regional bodies) contributing to or benefiting from energy production, consumption, or storage within the EC (no proximity criteria).
 - Non-Producers/Consumers: Investors, community supporters, educational and research institutions, government bodies, local businesses, and community representatives actively involved in the energy community without direct participation in energy-related activities.
- External:
 - Consumers of excess energy in the regional and wholesale energy market (energy supplier)

2. Value Propositions:

- Economic Value for Members:
 - Revenue: Energy sharing leads to better prices
 - Efficiency: Technically and financially optimized generation and consumption
 - Resilience and independence
- Economic Value for Externals:
 - Trading of renewable energy
 - Regional power, offering a regional product
- Social Value:
 - Fair pricing addressing energy poverty (look at chapter internal tariff models)
- Environmental Value:
 - Specific environmental benefits: Reduction in carbon footprint, contribution to sustainability, etc.

3. Channels:

- Energy trading platforms
- Direct marketing to consumers

4. Customer Relationships:

- Forums
- Feedback sessions
- Regular updates

5. Key Activities:

- Energy sharing: optimization of generation, consumption, storage, and flexibilities usage
- Market participation
- Monitoring and optimizing energy production and consumption
- EC manages energy and money flows, billing
- Community of communities with connected digital energy marketplaces; structures, how communities can interact with each other to use synergies
- Virtual cooperations (facilitate participation of prosumers due to non-proximity criteria)

6. Key Resources:

- RES for electricity / heat generation
- Technologies for generating and storing electricity and/or heat

- Heat pumps
- Investment capital
- Organizations and buildings with energy needs
- Digital systems for internal and external optimization (energy management systems, digital technologies)
- ICT system to track internal energy and money flows
- Hydro plants

7. Key Partners:

- Grid provider (providing grid and data for accounting)
- Energy supplier (buying and selling residual energy)
- Billing software provider
- Technology providers for generators, storage
- Regulatory Compliance Consultants
- ICT system provider
- DSO

8. Revenue Streams:

- Remuneration from selling excess energy (minus tax) for producers
- Reduction of energy bills for internal consumers
- Revenues from accounting/billing services to members
- Grants and Subsidies: national and European fundings for sustainability goals.
- Membership fees (to ensure commitment and cover administrative costs)
- Revenue-sharing mechanisms with members
- Internal tariff model (orientation on costs, feed-in tariff, prices energy provider, prices energy exchange (e.g. EPEX))

9. Cost Structure:

- One-Off Costs:
 - Investments in generators/power plants, storages (batteries)
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting)
 - Costs for buildings and production area: rent, space rent, energy costs, heating,..
 - Operational costs (energy management system, trading platform)
 - Energy production costs
 - Grid charges
 - Maintenance costs

4.1.3 Class 3: Collective Self-Consumption – Regional and Local

Proximity criteria production and consumption: only medium and low voltage levels

Example of legal implementation: local and regional REC (Austria)

1. Customer Segments:

- Internal:
 - Members or shareholders (citizens, SMEs, municipalities, regional bodies) actively engaged in energy production, consumption, or storage for/from the EC, utilizing only medium and low voltage levels (no high voltage lines).
- External:
 - Consumers of excess energy in the regional and wholesale energy market (energy supplier).
 - Neighboring districts looking for sustainable energy solutions.

2. Value Propositions:

- Economic Value for Members:
 - Empowerment through energy trading and flexibility services at the local level, reducing dependence on centralized energy providers.
 - Cost savings for members through internal energy trading and optimized consumption.
- Economic Value for Externals:
 - Access to sustainable and locally generated energy.
 - Flexibility services to manage peaks, benefiting the Distribution System Operator (DSO).
- Social Value:
 - Promotion of regionality and community building.
 - Job creation within the community through the operation and maintenance of local energy systems.
 - Fair pricing addressing energy poverty (look at chapter internal tariff models)
- Environmental Value:
 - High share of renewable energy sources (RES) contributing to a lower carbon footprint.
 - Reduction of environmental impact through local and sustainable energy practices.

3. Channels:

- Local and regional energy trading platforms for transparent transactions.
- Direct engagement through community outreach, workshops, and educational programs.

4. Customer Relationships:

- Foster a sense of community through regular communication, community forums, and collaborative decision-making. Regular meetings and workshops in person, celebrating milestones.
- Establish feedback loops for continuous improvement based on community input.

5. Key Activities:

- Facilitating energy trading and flexibility services for members and external stakeholders
- Continuous optimization of the interplay between local generation, storage, and consumption, leveraging advanced ICT for efficient energy management.
- Supporting regions/districts in operating their energy supply systems independently and in alignment with local contexts.
- Community of communities with connected digital energy marketplaces; structures, how communities can interact with each other to use synergies

6. Key Resources:

- Reliable grid connection
- Diverse RES generators (wind, PV, heat pumps, geothermal, waste-heat, biomass facilities).

- Electrical or thermal storage systems for efficient energy utilization.
- Investment capital to support infrastructure development.
- Buildings and entities with energy needs (electricity, heat).
- Digital systems for internal and external optimization (energy management systems, digital technologies).
- ICT system for transparent tracking of internal energy and financial flows.

7. Key Partners:

- Collaborative engagement with DSO/grid provider for grid usage and billing.
- Partnerships with billing software providers for efficient financial transactions.
- Technology providers for generators and storage systems, fostering technological advancements.
- ICT system provider
- Regulatory Compliance Consultants

8. Revenue Streams:

- Income from selling excess energy to the market (minus tax).
- Cost savings for internal consumers through internal trading.
- Grants and Subsidies: national and European fundings for sustainability goals.
- Membership fees ensuring commitment and covering administrative costs.
- Internal tariff model incorporating costs, feed-in tariff, and market prices (e.g., EPEX) for sustainable revenue.

9. Cost Structure:

- One-Off Costs:
 - Investments in diverse generators, power plants, and energy storage (batteries).
- Recurring Costs:
 - Administrative costs for day-to-day operations, management, legal compliance, and reporting.
 - Costs for buildings and production area: rent, space rent, energy costs, heating...
 - Operational costs for the energy management system and trading platform.
 - Energy production costs including maintenance and operational expenses.
 - (Reduced) grid charges, lower fees due to proximity, showcasing the community's commitment to sustainability (e.g., based on the example of REC Austria).

4.1.4 Class 4: Collective Self-Consumption – Residential

Proximity criteria production and consumption: below one grid access point (multi-tenant buildings)

Example of legal implementation: Quartierstrom, Mieterstrom (Germany); Gemeinschaftliche Erzeugungsanlage (Austria)

1. Customer Segments:

- Internal:
 - Members or shareholders: Citizens, SMEs, municipalities, regional bodies.
 - Role: Produce, consume, or store energy within the community.
 - Proximity Criteria: Units within the same building under the same grid access point.
- External:
 - Consumers of excess energy in regional and wholesale energy markets (energy suppliers).

2. Value Propositions:

- Economic Value for Members:
 - Sharing Economy:
 - Shared energy leads to better prices for buying and selling, translating to lower energy bills.
 - Efficient matching of energy generation with consumption for cost optimization.
 - Resilience and Independence:
 - Increased self-sufficiency and energy independence.
 - Community manages energy and money flows, including billing, ensuring transparency and control.
 - Local Economic Development:
 - Keeping the created value within the region, supporting local businesses and jobs.
- Economic Value for Externals:
 - Local and Sustainable Energy Source: Access to locally sourced, sustainable energy reduces dependence on non-renewable resources.
- Social Value:
 - Community Building: Fostering a sense of community and collaboration.
 - Empowering residents to actively participate in sustainable practices.
 - Energy Education: Educational programs on energy conservation and sustainable living for community members.
 - Fair pricing addressing energy poverty (look at chapter internal tariff models)
- Environmental Value:
 - Reduced Carbon Footprint:
 - Use of renewable energy sources significantly lowers the environmental impact.
 - Collective efforts towards a greener and more sustainable future.

3. Channels:

- Internal communication channels for member participation (community meetings, newsletters, online forums).
- External channels for collaboration with partners (industry events, joint initiatives).

4. Customer Relationships:

- Internal:
 - Regular engagement through meetings in person, educational programs, workshops, and community events like celebrating milestones.
 - Transparent communication on energy production, consumption, and financial aspects.
- External:

- Collaborative relationships with energy suppliers for effective energy exchange.

5. Key Activities:

- Generation, Storage, and Consumption:
 - Implementing renewable energy solutions within residential units, such as solar panels and energy storage systems.
 - Utilizing storage solutions for optimized consumption and grid independence.
- Tenant-Power (Mieterstrom-Modell):
 - Enabling controlled, self-supplied energy within the community through innovative financing models.
- Connection with other communities in neighborhood; connected via digital energy marketplaces; structures, how communities can interact with each other to use synergies

6. Key Resources:

- Supply:
 - Renewable energy sources (wind, sun, water, biomass, waste-heat).
 - Space for generators and storage units.
 - Capital for initial investments and ongoing operations.
- Demand:
 - Buildings with energy needs (electricity, heat) within the community.
- System:
 - Digital systems for internal and external optimization (energy management systems, digital technologies).
 - ICT system to track and manage internal energy and financial flows.

7. Key Partners:

- Grid Provider: Necessary for billing but not for energy supply, fostering a collaborative relationship.
- Billing Software Provider. Seamless integration and accurate billing for members.
- Technology Providers: Collaboration with cutting-edge providers for generators and storage solutions.
- ICT system provider
- Regulatory Compliance Consultants

8. Revenue Streams:

- Energy Sales: Remuneration from selling excess energy to the market (minus tax).
- Reduced Energy Bills: Internal consumers benefit from lower energy bills, creating an incentive for active participation.
- Membership Fees: Ensuring commitment and covering administrative costs.
- Internal Tariff Model: Oriented on costs, feed-in tariff, energy provider prices, and energy exchange prices (e.g., EPEX).
- Grants and Subsidies: national and European fundings for sustainability goals.

9. Cost Structure:

- One-Off Costs:
 - Investments in generators/power plants, storages (batteries), and initial setup.
 - Education and training programs for community members.
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting).
 - Costs for buildings and production area: rent, space rent, energy costs, heating,..
 - Operational costs for energy trading (energy management system, trading platform).
 - Energy production costs, including maintenance and upgrades.
 - No or reduced grid charges, emphasizing grid independence.
 - Ongoing community events and education programs.

4.1.5 Class 5: Collective Self-Consumption – Energy Islands

Example: TILOS, Greece, cellular system as in SINTEG, holonic model as in PolyEnergyNet

1. Customer Segments:

- Internal:
 - Members or shareholders (citizens, SMEs, municipalities, regional bodies) actively involved in energy production, consumption, or storage for/from the EC (island grid participants).
- External:
 - Consumers of excess energy on the island, not part of the EC.
 - Local energy supplier interested in collaboration.

2. Value Propositions:

- Economic Value for Members:
 - Specialized energy solutions for a unique island context.
 - Assured energy supply through self-production.
 - Enhanced energy security and autonomy.
- Economic Value for Externals:
 - Access to reliable and locally generated energy.
 - Opportunity for local energy suppliers to collaborate and optimize their operations.
- Social Value:
 - Fair pricing addressing energy poverty (look at chapter internal tariff models)
- Environmental Value:
 - High share of renewable energy sources (RES) contributing to a lower carbon footprint.

3. Channels:

- Direct engagement through community forums, workshops, and local events.
- Collaboration with local energy suppliers for consumer outreach.

4. Customer Relationships:

- Regular engagement through meetings in person, educational programs, workshops, and community events like celebrating milestones.
- Collaborative decision-making processes involving community stakeholders.

5. Key Activities:

- Facilitating energy trading and flexibility services for members and external consumers.
- Optimizing the interplay of local generation, storage, and consumption using advanced ICT systems.
- Empowering the island to operate its energy supply systems independently.
- Connection with other communities on the island; connected via digital energy marketplaces; structures, how communities can interact with each other to use synergies

6. Key Resources:

- local distribution system capable of standalone operation (due to missing/partial existing/instable connection to the main grid)
- Supply:
 - Renewable energy sources (wind, sun, water, biomass, waste-heat).
 - Generators (electricity, heat).
 - Energy storage.
 - Black start capability, fast/flexible starting power plants.
 - Investment capital.
- Demand:
 - Objects with energy needs (electricity, heat).

- ICT system for transparent tracking of internal energy and financial flows.

7. Key Partners:

- Grid provider for billing and grid-related services.
- Billing software provider.
- Technology providers for generators and storage systems.
- ICT system provider
- Providers of digital systems for internal and external optimization (energy management systems, digital technologies).
- Political institutions (municipality, local government) for regulatory support.
- Regulatory Compliance Consultants

8. Revenue Streams:

- Internal sales for energy producers.
- Reduction of energy bills for internal consumers.
- Grants and Subsidies: national and European fundings for sustainability goals.
- Membership fees to ensure commitment and cover administrative costs.
- Internal Tariff Model:
 - Creation of an internal market due to independence from the main grid.
 - Smart pricing based on supply-demand models.
 - Digital systems collecting data and creating prices for efficiency.

9. Cost Structure:

- One-Off Costs:
 - Investments in generators/power plants, storages (batteries).
- Recurring Costs:
 - Administration costs for day-to-day operations, management, legal compliance, and reporting.
 - Costs for buildings and production area: rent, space rent, energy costs, heating,..
 - Operational costs including grid costs if operated by the community, energy management, and production costs.
 - Maintenance costs for infrastructure.
 - (Reduced) grid charges.

4.1.6 Class 6: Municipal Utilities and Citizen Controlled Utilities

Example: ElektrizitätsWerke Schönau eG (EWS), Hindelang coop stadtwerte (Germany)

1. Customer Segments:

- Internal:
 - Members or shareholders: (existing) organizations for a) grid operation or b) energy production/supply under citizens' control – directly (e.g. cooperative) or indirectly (e.g. controlled by local government)
 - Municipality/local government
- External:
 - Citizens, SMEs, municipalities, regional bodies which produce, consume, or store energy (provide flexibilities) for/from the EC (proximity criteria - using only lower levels of the public grid, no high voltage lines)
 - Consumers of excess energy in the wholesale energy market (other energy suppliers)
 - Neighboring districts (using high voltage lines)

2. Value Propositions:

- Economic value for members:
 - Direct participation in local energy production and supply.
 - Decision-making power in energy-related matters.
 - Potential economic benefits from the energy community's operations.
- Economic value for externals:
 - Access to locally sourced, sustainable energy.
 - Participation in a community-driven energy system.
- Social value:
 - Fostering a sense of community and citizen involvement.
 - Promoting local economic development and job creation.
- Environmental value:
 - Increased use of renewable energy sources.
 - Reduction in carbon footprint and environmental impact.

3. Channels:

- Internal communication channels for member participation (community meetings, newsletters, online forums).
- External channels for collaboration with partners (industry events, joint initiatives).

4. Customer Relationships:

- Regular engagement through educational programs, workshops, and community events.
- Transparent communication on energy production, consumption, and financial aspects.
- Collaborative relationships with energy suppliers for effective energy exchange.

5. Key Activities:

- a) Own and operate low-voltage local energy grid/microgrid (including isolated grids like on islands or remote areas).
- b) Local/regional energy supply.

6. Key Resources:

- a) Ownership of the local low-voltage electricity grid or heat distribution grid.
- b) Ownership of a local energy supplier company.
- RES production facilities.
- ICT infrastructure to track internal energy and money flows.

7. Key Partners:

- Grid provider.
- Political institutions on the island.
- Renewable energy technology providers.
- ICT system provider
- Regulatory Compliance Consultants

8. Revenue Streams:

- a) Remuneration from selling energy to local customers and to the market (minus tax).
- b) Revenues for energy supply management.
- Grants and Subsidies: national and European fundings for green transition (tax benefits, investment subsidies)

9. Cost Structure:

- One-Off Costs:
 - Investments in generators/power plants, big storages (batteries, heat storage).
 - Education and training programs for community members.
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting).
 - Costs for buildings and production area: rent, space rent, energy costs, heating ...
 - Operational costs for a): Cost for balancing electricity/heat, grid relief, emergency management of the system; grid costs are socialized over all connected consumers and concern long-term investment (depreciation times of 20 to 50 years for most assets).
 - Operational costs for b): Energy production costs, Energy purchases.
 - (Reduced) grid charges.

4.1.7 Class 7: Collective Investment and Financial Aggregation – Renewable Energy

Example: Cowdfunding green-energy projects (e.g., GoParity, Crowdspace, [zenob](#))

1. Customer Segments:

- Internal:
 - Members or shareholders: citizens, SMEs, municipalities, regional bodies investing collectively in renewable energy projects.
 - Collaborate with crowdfunding websites/platforms.
- External:
 - Non-profits, SMEs, startups, and energy projects as recipients of funds.
 - External investors interested in contributing to green/impact investments.

2. Value Propositions:

- Economic value for members and investors:
 - Investment options with attractive financial returns.
 - Explore tax benefits and deductions for investors.
- Economic value for externals:
 - Attractive financing options for renewable energy projects.
 - Investment opportunities.
- Social value:
 - Support social housing and address energy poverty.
 - Social impact investment opportunities. Participation and identification for energy transition
 - Sense of ownership
- Environmental value:
 - Environmental impact investment opportunities: promote green energy for positive environmental impacts.
 - Emphasize the role of investors in driving sustainable practices.

3. Channels:

- Marketing Strategies:
 - Utilize online and offline channels to attract external investors.
 - Leverage social media, content marketing, and community events.
- Brand Visibility:
 - Enhance brand visibility through various communication channels.
 - Collaborate with local media for wider coverage.

4. Customer Relationships:

- Investor Relations:
 - Provide regular updates on project performance.
 - Maintain transparent and open communication with investors.

5. Key Activities:

- Collective investment in independent renewable energy projects outside of the community (popular: PV plants, Wind turbines).
- No direct operation of projects, focus on financial gains and impact investment.
- Role of EC: can act via direct investment (members provide money) or as an enabler, where the EC provides some platform to acquire investors (e.g. crowdfunding platform).
- Investment types: equity, debt, P2P lending, reward, donation.
- Impact investment with a focus on social and environmental impact.

6. Key Resources:

- Financial Resources:
 - Secure funds for investments and administrative costs.
 - Establish relationships with financial institutions for additional support.
- Network of investors: Build and maintain a diverse network of investors.
- Technology infrastructure: Platform for acquisition of external investors (user-friendly, safe, robust).

7. Key Partners:

- Legal and Financial Advisors:
 - Facilitate the creation of robust investment contracts.
 - Ensure compliance with financial regulations.
- Regulatory Compliance Consultants:
 - Ensure legal adherence and regulatory compliance.
 - Seek experts to navigate cross-border investment regulations.
- External Investors:
 - Build relationships with individual and institutional investors.
 - Explore partnerships with impact investors aligned with community values.
- Website/Platform Developer and Operator:
 - Collaborate with tech experts to develop a secure and user-friendly investment platform.
 - Establish ongoing partnerships for platform maintenance and updates.

8. Revenue Streams:

- Interest rates/return on investment: directly benefit investors.
- Membership fees (to ensure commitment, to cover administrative costs).
- Performance-based fees (e.g. a percentage of the returns could be collected by the EC if the project exceeds certain performance metrics.)
- Tax deduction: not clear: Who is taxable? EC or investors?
- Grants and Subsidies: national and European fundings for energy projects.
- Tax benefits through “sustainable investments”
- Funds raised through crowdfunding.
- Returns for external investors.

9. Cost Structure:

- One-Off costs:
 - Technology costs (development and implementation of the investment platform).
- Recurring costs:
 - Administration costs (day-to-day operations, management, legal compliance and reporting).
 - Maintenance costs of the investment platform.

Special category: Risk Management

- Especially for financial purposes it is important to identify potential risks associated with investments.
- Develop mitigation strategies to safeguard community and investor interests.

4.1.8 Class 8: Collective Investment and Financial Aggregation - Energy Efficiency

Example: [BEC program](#) (Ireland. using [SEAI](#) funding)

1. Customer Segments:

- Internal:
 - Members can be citizens, SMEs and local authorities collectively investing in and carrying-out energy efficiency projects; including the involved services required to carry out the delivery (e.g. auditing, planning, financing, providing credit, installing, managing, etc.).
- External:
 - Recipients of funds (e.g. energy project owners)
 - Service providers (i.e. services can be provided by members or external actors, depending on whether or not they are members of the community)
 - External investors (interested in contributing to green/impact investments)

2. Value Propositions:

- Economic value for members and investors:
 - Investment options with attractive financial returns
 - Reduced energy consumption and associated costs
 - Tax benefits and deductions
- Economic value for externals:
 - Attractive financing options for energy efficiency projects
 - Market access & investment opportunities
 - Tax benefits and deductions
 - Reduced energy distribution & supply requirements
- Social value:
 - Support social housing and address energy poverty
 - Social impact investment opportunities
 - Collective legal representation (i.e. bargaining power, leverage)
 - Participation in and identification with energy transition
- Environmental value:
 - Environmental impact investment opportunities: promote reduced energy consumption for positive environmental impacts.
 - Emphasize the role of investors in driving sustainable practices.

3. Channels:

- Marketing Strategies:
 - Utilize online and offline channels to attract external investors.
 - Leverage social media, content marketing, and community events.
- Brand Visibility:
 - Enhance brand visibility through various communication channels.
 - Collaborate with local media for wider coverage.
- One stop shops

4. Customer Relationships:

- Investor Relations:
 - Provide regular updates on project performance (e.g. reduced energy consumption).
 - Maintain transparent and open communication with investors.
- Community member relationships
 - Provide information on efficiency measures and impact of investments (e.g. savings)

5. Key Activities:

- Collective investment/financing of energy efficiency projects, together with start-ups, SMEs and municipalities (e.g. energy efficiency device for a local school, etc).
- Activities may involve building insulation (including windows, doors, water, air heating systems, etc.), passive house design and adaptation of existing structures, electrification of heat (e.g. through heat pumps), etc.
- Community can act via direct investment (members provide money) or as an enabler, where the EC provides some platform to acquire investors who contribute to project financing (e.g. crowdfunding platform).
- Investment types: equity, debt, P2P lending, reward, donation.
- Impact investment with focus on social and environmental impact.

6. Key Resources:

- Technology infrastructure: Community owned/inhabited buildings, third-party buildings of investment recipients, heating systems, efficient building envelopes and other elements of the residential structure.
- Intellectual: IP of member SMEs, data from local authorities
- Financial Resources:
 - Secure funds for investments and administrative costs.
 - Establish relationships with financial institutions for additional support.
- Software: Platform to build network of investors: Build and maintain a diverse network of investors (brought together through investment platform)

7. Key Partners:

- Legal and Financial Advisors:
 - Facilitate the creation of robust investment contracts.
 - Ensure compliance with financial regulations.
- Regulatory Compliance Consultants:
 - Ensure legal adherence and regulatory compliance.
 - Seek experts to navigate cross-border investment regulations.
- Efficiency auditors/ ESCOs:
 - Evaluate potential for implementation of efficiency measures
 - Carry out efficiency projects
- Tech providers and installers:
 - Provide and install efficiency equipment
- External Investors:
 - Build relationships with individual and institutional investors.
 - Explore partnerships with impact investors aligned with community values.
- Website/Platform Developer and Operator:
 - Collaborate with tech experts to develop a secure and user-friendly investment platform.
 - Establish ongoing partnerships for platform maintenance and updates.

8. Revenue Streams:

- Interest rates/return on investment
- Membership fees (to ensure commitment, to cover administrative costs).
- Performance-based fees (e.g. a percentage of the returns could be collected by the EC if the project exceeds certain performance metrics.)
- Tax deduction and/or benefits through sustainable investments
- Grants and Subsidies: national and European fundings for energy projects.
- Funds raised through crowdfunding

9. Cost Structure:

- One-Off costs:
 - Technology costs including cost of installation

-
- Planning, auditing, financing and management costs
 - Recurring costs:
 - Administration costs (day-to-day operations, management, legal compliance and reporting).
 - Costs for buildings: rent, energy costs
 - Maintenance costs of the investment platform.

Special category: Risk Management

- Especially for financial purposes it is important to identify potential risks associated with investments.
- Develop mitigation strategies to safeguard community and investor interests.

4.1.9 Class 9: Collective Technical Service Provision

Example: [Restore Energy](#) in the Netherlands

1. Customer Segments:

- Internal:
 - Members can be citizens (e.g. residential prosumers), SMEs (e.g. energy service companies, commercial or small industrial prosumers), municipalities
- External:
 - External consumers which are not members
 - Beneficiaries of service provision by community (e.g. flexibility buyers)

2. Value Propositions:

- Economic value for members:
 - Remuneration for services
 - Access to technical services
 - Reducing energy costs
 - Increasing grid reliability
 - Increasing self-consumption
 - Becoming a living lab
- Economic value for externals:
 - Access to otherwise hard-to-get customers
 - Flexibility, mobility and storage options
 - Energy management options
 - One-stop-shop for energy solutions
- Social value:
 - Participation in the energy transition
 - Implementation and use of innovations
- Environmental value:
 - Reduced environmental impact due to the implementation of renewable technologies

3. Channels:

- Digital platforms (e.g. website, social media, etc)
- Direct communication channels with members and partners
 - Mail
 - E-mail
 - Phone
- One stop shops

4. Customer Relationships:

- Support team
- Collaborative relationships with members for service customization
- Regular updates and communication on energy services

5. Key Activities:

Provide collective financing technical services like (by community or by third party):

- a) Flexibilities: the flexibility offered by assets (including storage) owned by a group of consumers or prosumers in order to provide grid services and/or improve self-consumption profiles; EMS directly controls and optimises assets, processes power supply and consumption data, weather forecast and electricity prices; price-based approaches for flexible consumption (e.g. residential flexibility aggregation include TIKO, ThermoVault and domX)

- b) Mobility: provision of electric car sharing services or electric charger sharing (e.g. Cambio (Belgium), Partago (Belgium) and Som Mobilitat (Spain)), platform for car-pooling or offering fleet management services, (e.g., Mobicoop in France)

Combination of a) and b)

- Electric vehicles represent large loads but also significant electricity storage capabilities, energy communities may as well employ them as such in combination with other services or business models (such as flexibility services, making use of EMS assets). For example, self-consumption can be increased when optimizing the charging patterns of electric vehicles to absorb peaks of renewable electricity production or act as storage. When used as flexibility resources, the vehicles can exploit vehicle-to-home, vehicle-to-grid and grid-to-vehicle modes (e.g. Octopus in the UK has been testing).
- Managing energy assets and optimizing usage: reliable electricity supply, thermal comfort, hot water, lighting etc. Management services can be provided by Energy Service Companies (ESCOs) via an energy service contract. Energy communities can work with external companies to establish a community ESCO serving themselves and others.

6. Key Resources:

- Flexibility resources (e.g. storages for electricity or heat, and flexible energy production and consumption resources)
- ICT equipment (e.g. to automate asset management, tracking internal energy and money flows)
- Electric cars or electric charger stations
- Expertise in energy services
- Regulatory Compliance Consultants

7. Key Partners:

- Grid providers
- Energy suppliers
- Tech providers and maintenance/support teams
- Markets representatives (e.g. BRPs, brokers, traders)
- Technology suppliers (e.g. hardware and software for charging stations, EV technology providers)
- Local government (e.g. for renovation strategy)
- Other service providers (e.g. integrators)

8. Revenue Streams:

- Service fees for providing collective services
 - Different prices for members and external customers
- Revenues from participation shares
- Membership fees (ensuring commitment and covering administrative costs)
- Grants and Subsidies: national and European fundings for energy projects

9. Cost Structure:

- One-Off Costs:
 - Investments in technical equipment (e.g. batteries, thermal storage, EMSs, etc.)
 - Investments in infrastructure, maintenance, and operation costs for running services
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting)
 - Costs for buildings: rent, energy costs
 - Operational costs for conducting services (energy costs, personnel, resources)
 - Maintenance costs and repairs of equipment.

4.1.10 Class 10: Smart Digital Systems

Example: MéryGrid Belgium (smart energy grid), residential flexibility aggregation include TIKO, ThermoVault and domX

1. Customer Segments:

- Internal:
 - Members can be citizens (e.g. residential prosumers, flexibility sellers), SMEs (e.g. platform operators, energy service companies, commercial or small industrial prosumers), Municipalities (e.g. local governments)
- External:
 - Service providers (e.g. digital platforms, local energy and flexibility market facilitators)
 - System integrators

2. Value Propositions:

- Economic Value for Members:
 - Financial return
 - Increasing self-consumption
 - Increasing grid reliability
 - Reducing energy costs
 - Peer-to-peer energy trading
 - Becoming a living lab
- Economic Value for Externals:
 - Digital tools increase efficiency in energy generation, consumption, and storage optimization
 - Better integration of citizens in platform economy (i.e. local system integration into national energy systems)
- Social value:
 - Participation and a sense of ownership in the energy transition
 - Digital community resource management
 - Implementation and use of innovations
 - Social value depends on system design (e.g. transparency, data access, data ownership, blockchain, etc)
- Environmental value:
 - Reduced environmental impact due to the implementation of renewable technologies
 - Cross-sector decarbonisation through digital management

3. Channels:

- Website and social media
- Events, including local events
- Dedicated support team
- Marketing strategies
- Exhibitions and demos
- One stop shops

4. Customer Relationships:

- Collaborative relationships with members for customization, development and testing
 - Feedback collection
 - Maintenance & Upgrades
- Regular updates and communication on provided services
- Webinars

5. Key Activities:

- Energy and flexibility aggregation:

- Aggregator pools together the flexibility offered by the assets of a group of consumers or prosumers through digital tools, to
 - reach the thresholds required to enter markets and
 - provide grid services
- Digital services:
 - Digital energy supply (e.g. virtual self-consumption schemes)
 - Blockchain services for transparent transactions and immutable ledgers
 - Data analytics (e.g. supply and demand forecasts) and asset optimization
 - P2P trading
 - Integration with energy market platforms
 - Continuous improvement of digital systems
- Digital Platforms:
 - Access to and simplification of complex data
 - User-defined preferences
 - Payment and remuneration
- System integration services:
 - Integration to systems of key partners
 - Provide APIs for integration
 - Continuous integration and development

6. Key Resources:

- Grid digitalisation technologies
- Distributed energy resource management technologies
- Data analytics tools.
- Digital (community management) platforms to track energy and monetary flows
- Technology experts

7. Key Partners:

- Technology providers (e.g. start-ups and SMEs developing innovative hardware and software)
- Data analytics firms
- Energy management system providers
- Grid operators
- Energy market platforms
- Research and development institutions
- Regulatory Compliance Consultants

8. Revenue Streams:

- Subscription fees for community members (platform usage fees).
- Data analytics services for grid operators.
- Licensing fees for digital services, software, etc.
- Consulting services for digital energy optimization.
- Membership fees (to ensure commitment and cover administrative costs).
- Potentially, revenue-sharing from energy transactions.
- Grants and Subsidies: national and European fundings for green and digital projects (following the EU twin transition)

9. Cost Structure:

- One-Off Costs:
 - Technology: Development and implementation of digital systems, ICT system.
 - Integration costs with existing systems.
- Recurring Costs:
 - Administration costs (day-to-day operations, management, legal compliance, and reporting).

- Costs for office buildings: rent, energy costs
- Operational costs for digital services (electricity).
- Data analytics costs.
- Maintenance costs of digital systems, ICT system.

4.2 Combination of business models

Several business models may be used by one energy community at the same time, as most are not mutually exclusive and might instead be complementary (value stacking, synergies). Figure 2 shows possible combinations of business models but are only suggestions. The list below should describe possible combinations in more detail including synergies and considerations. Especially combinations with digital solutions from class 10 is discussed in more detail.

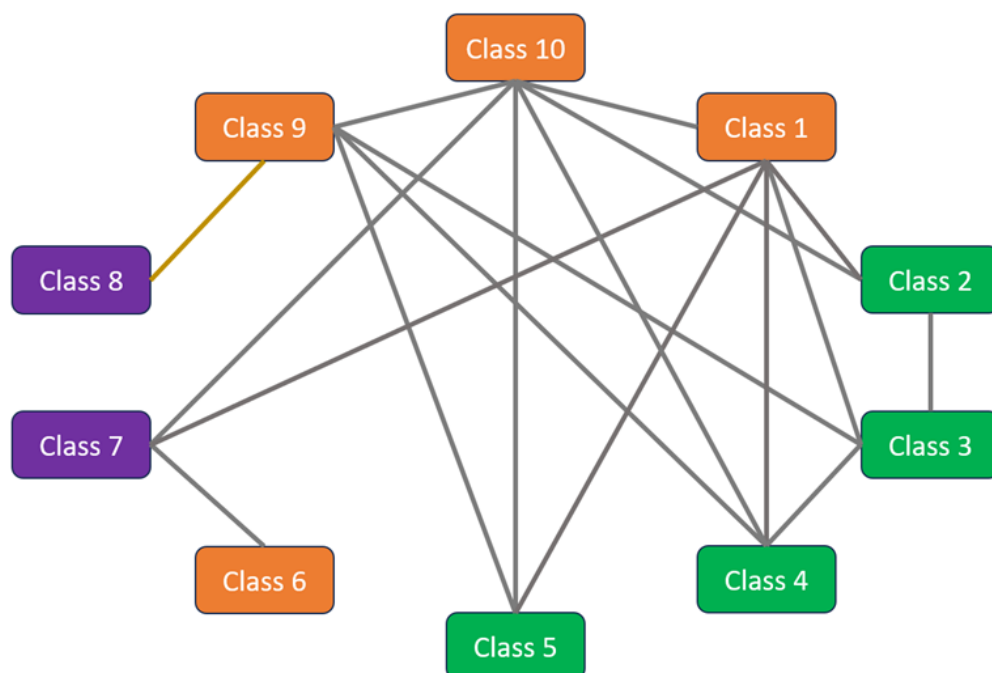


Figure 2: Combination of business models

Complementary Business Model Combinations (Value-Adding Synergies):

1. **Class 1 (Collective Generation and Trading) + Class 2,3,4,5 (all classes for Collective Self-Consumption):**
 - *Synergy:* Generation capacity can be used for both internal consumption and trading, maximizing the utilization of renewable resources.
 - *Considerations:* Ensure that the trading activities do not compromise the closed nature of self-consumption.
2. **Class 4 (Collective Self-Consumption - Residential) + Class 3 (Collective Self-Consumption – Regional and Local):**
 - *Synergy:* Residential self-consumption models can be complemented by larger regional and local networks, promoting scalability and regional energy autonomy.
 - *Considerations:* Align the interests of individual residents with the broader goals of regional self-consumption.
3. **Class 2 (Collective Self-Consumption – without proximity) + Class 3 (Collective Self-Consumption – Regional and Local):**
 - *Synergy:* Regional and local self-consumption models can be complemented by larger national and international networks, promoting scalability and national/European energy autonomy.
 - *Considerations:* Align the interests of individual regional/local residents with the broader goals of national and international self-consumption.

4. **Class 6 (Municipal Utilities and citizen-controlled utilities) + Class 7 (Collective Investment - Renewable Energy):**
 - *Synergy:* Municipal utilities can act as both owners/operators and investors in renewable energy projects, fostering local energy resilience and attracting citizen investors.
 - *Considerations:* Ensure alignment of investment goals with the community's energy objectives.
5. **Class 1 (Collective Generation and Trading) + Class 7 (Collective Investment - Renewable Energy)**
 - *Synergy:* Community can act as both owners/operators and investors in renewable energy projects
 - *Considerations:* Ensure alignment of investment goals with the community's energy objectives.
6. **Class 9 (Collective Technical Service Provision) + any class with Self-Consumption (Class 2, 3, 4, 5):**
 - *Synergy:* Services like energy management, mobility solutions, and renovation support can enhance the overall value for communities engaged in energy consumption activities. Also to consume energy in flexible ways to lower their energy prices.
 - *Considerations:* Maintain a clear distinction between service provision and energy production/consumption to avoid conflicts of interest.

Complementary Business Model Combinations with Class 10 (Smart Digital Systems):

1. **Class 10 + Class 1 (Collective Generation and Trading):**
 - *Synergy:* Digital systems can enhance the efficiency of collective generation and trading by providing real-time monitoring, optimization, and transparent energy transactions through blockchain or other technologies. Considering class 1 is as VPP (Virtual Power Plant) it has the necessary requirement of digital technology to operate and interconnect the different energy assets forming the VPP. Thus, class 1 could be seen as not only complementary, but dependent on class 10.
 - *Considerations:* Ensure seamless integration of digital systems into the collective generation and trading processes to maximize benefits.
2. **Class 10 + Class 5 (Collective Self-Consumption - Energy Islands):**
 - *Synergy:* Digital systems play a crucial role in managing energy flows and optimizing self-consumption on energy islands. Real-time monitoring and control contribute to the resilience and stability of island systems.
 - *Considerations:* Address privacy concerns and ensure the community's acceptance of digital systems on energy islands.
3. **Class 10 + Class 7 (Collective Investment – Renewable Energy):**
 - *Synergy:* Digital systems can be integrated into renewable energy production projects to enhance monitoring, maintenance, and performance optimization, providing increased transparency and revenues to investors.
 - *Considerations:* Ensure that the digital systems align with the goals of renewable energy production and contribute positively to the financial and operational aspects.
4. **Class 10 + Class 9 (Collective Technical Service Provision):**
 - *Synergy:* Digital systems can optimize and facilitate various energy services, such as EV charging station management, demand-side management, and energy-efficient renovations, enhancing overall service provision.
 - *Considerations:* Ensure that the digital systems are versatile enough to support different service provisions and that data privacy is prioritized.
5. **Class 10 + Class 4 (Collective Self-Consumption - Residential):**
 - *Synergy:* In residential self-consumption settings, digital platforms can provide residents with user-friendly interfaces for monitoring and controlling their energy consumption, fostering active participation.

- *Considerations:* Tailor digital systems to meet the specific needs and preferences of residential users, addressing any potential barriers to adoption.

4.3 Internal Tariff Models (for energy sharing communities)

Energy sharing communities need internal tariff models to set prices for energy. There exist static or dynamic pricing models. Prices should reflect a fair return on investment for community members who contribute with energy to the community. Designing the internal tariff model, one can consider the following variables:

1. **Costs:**
 - *Capital Costs (Equity and Debt Capital):* Include the initial investment required for the installation of energy infrastructure, such as renewable energy systems, storage, and grid connections. Equity capital is provided by community members, while debt capital may be involved.
 - *Operating Expenses:* Encompass ongoing operational costs, maintenance, and administrative expenses.
 - *Definition:* The rate at which community members are compensated for the renewable energy they export to the grid (feed-in tariffs, feed-in premiums, PPAs).
2. **Energy Prices from Energy Provider:**
 - *External Energy Purchases:* Energy purchased from external providers to cover the needs for which internally generated energy doesn't suffice.
 - *Considerations:* Balance between cost-effectiveness and the community's commitment to renewable sources.
3. **Energy Prices from Energy Exchange (e.g., EPEX):**
 - *Market Prices:* Prices associated with buying or selling energy directly on the open market, instead of making use of feed-in tariffs and external energy providers.
 - *Considerations:* Integration of market dynamics, fluctuations, and real-time pricing for dynamic tariff models.
4. **Subsidies:**
 - *Government Support and Incentives:* Explore various subsidies, grants, and incentives provided by government entities to promote renewable energy initiatives. Governments often offer financial support to communities adopting sustainable practices, which can significantly alleviate initial capital costs and improve the overall economic feasibility of energy-sharing projects.
 - *Renewable Energy Certificates (RECs):* Consider incorporating the value of Renewable Energy Certificates into the internal tariff model. RECs represent the environmental benefits of renewable energy generation and can be traded on the market. By factoring in RECs, the community can diversify its revenue streams and encourage members to contribute more to renewable energy production.
 - *Tax Credits:* Investigate available tax credits related to renewable energy projects. Tax incentives can play a crucial role in reducing the financial burden on community members and improving the return on investment over the project's lifespan. Understanding and incorporating these credits into the tariff model can enhance its financial sustainability.

When designing the internal tariff model, considerations should include the following aspects. Please also consider overlapping aspects with the general success factors in chapter 2.

- **Fairness:** Ensuring that the costs and benefits are distributed fairly among community members based on their contributions and usage.
- **Transparency:** Providing clear information on how the tariff is calculated, including the factors considered and the methodology used.
- **Sustainability:** Aligning the tariff model with the community's sustainability goals, encouraging energy efficiency, and promoting renewable energy use.

- **Flexibility:** Allowing for adjustments to the tariff model over time to adapt to changing costs, technologies, and regulatory environments.
- **Incentives:** Incorporating elements that incentivize energy efficiency, renewable energy production, and overall positive contributions to the community's energy goals. Also considering tax breaks.
- **Community Engagement:** Involving community members in the decision-making process related to tariff design and adjustments.
- **Dynamic Pricing Models:** Consideration of dynamic pricing models that reflect real-time market conditions, encouraging flexible energy usage and storage.
- **Risk Mitigation:** Strategies to address and mitigate risks, such as fluctuations in market prices or unexpected maintenance costs.

The specific design will depend on the unique characteristics, goals, and preferences of the energy sharing community. Regular reviews and adjustments to the internal tariff model can help ensure its effectiveness and alignment with the community's evolving needs.

A task force of the European Commission bridge initiative provided great input concerning tariff models (bridge, 2021). Please consider the link in the reference section, where tariff models are analyzed in depth.

5 Organizational forms for collective and cooperative energy supply and Energy Communities

5.1 List and description of possible organizational forms

Energy communities in the European Union can take various organizational forms, and the choice often depends on factors such as the community's goals, legal and regulatory frameworks in the specific country, and the level of community engagement. The legal form influences the business model and vice versa, and has significant impacts on the cost structure of ECs. The following list of common organizational forms for energy communities in the EU is a combination of various sources (Rural Energy Community Advisory Hub, n.d.), (REScoop.EU, 2023), (Frieden, Tuerk, Neumann, D'Herbement, & Roberts, 2020) and own thoughts.

1. Cooperatives:

- *Description:* Cooperatives are member-owned organizations where individuals or entities join together voluntarily to meet common economic, social, and cultural needs. Each member typically has an equal say in decision-making.
- *Advantages:* Democratically controlled, member participation, shared benefits.
- *Disadvantages:* Decision-making may be slower due to consensus requirements, potential for conflicts among members.

2. Associations:

- *Description:* Associations are organizations formed by individuals or entities with a common purpose. They may be non-profit or for-profit entities and are often governed by a board of directors or committee.
- *Advantages:* Flexibility in structure, adaptable to different goals, can be non-profit.
- *Disadvantages:* Limited liability may not be as strong as in other legal structures, potential for conflicts among members.

3. Foundations:

- *Description:* Foundations are legal entities typically established to support a specific cause. They may fund projects, provide grants, or undertake direct initiatives related to renewable energy and sustainability.
- *Advantages:* Dedicated funding, long-term impact focus.
- *Disadvantages:* May face restrictions on profit-generating activities, potentially limited community engagement.

4. Limited Liability Company (LLC):

- *Description:* An LLC is a flexible legal structure that combines elements of partnership and corporation. Members have limited liability, and it can be suitable for profit-driven energy community projects.
- *Advantages:* Limited liability, flexibility in management.
- *Disadvantages:* Less emphasis on democratic governance, may face challenges in aligning profit goals with community interests.

5. Municipal Corporation or Local Authority-Owned Entities:

- *Description:* Local governments or municipalities may establish entities to manage and operate renewable energy projects. These entities can involve local citizens and businesses as shareholders.
- *Advantages:* Local control, community involvement, alignment with local goals.
- *Disadvantages:* Bureaucratic processes, potential for political influence on decision-making.

6. Partnerships:

- *Description:* Partnerships involve two or more entities joining forces to pursue common goals. They can take the form of general partnerships, limited partnerships, or public-private partnerships.
- *Advantages:* Shared resources, collaboration between different stakeholders.
- *Disadvantages:* Limited liability may vary depending on the type of partnership, potential for conflicts of interest.

7. Social Enterprises:

- *Description:* Social enterprises combine commercial activities with a social or environmental mission. Profits generated are often reinvested in the community or used to further the social cause.
- *Advantages:* Blend of profit and social impact, sustainable funding.
- *Disadvantages:* Balancing financial sustainability with social impact, potential tension between social and profit goals.

8. Community Benefit Societies:

- *Description:* These are organizations formed for the benefit of the community. Profits and assets are used for community purposes, and members typically have a say in decision-making.
- *Advantages:* Community-focused, democratic governance.
- *Disadvantages:* Limited flexibility in fundraising and operations, potential challenges in scaling.

9. Community Land Trusts:

- *Description:* Community Land Trusts (CLTs) can be used for community-owned land and property. They separate ownership of land from the buildings on it, allowing communities to control land use.
- *Advantages:* Community control over land, long-term affordability.
- *Disadvantages:* Limited applicability to certain projects, potential challenges in commercial viability.

It's essential to consider local legal requirements, tax implications, and regulatory frameworks when choosing the organizational form for an energy community in the EU. Additionally, seeking legal advice and consulting with relevant authorities can help ensure compliance with specific regulations in the country of operation.

5.2 Which organizational forms would fit which classes?

Class 1: Collective Generation and Trading of Renewable Energy

- **Organizational Forms: Cooperatives, Limited Liability Companies (LLC), Municipal Corporation or Local Authority-Owned Entities**
 - *Reasoning:* This class often involves multiple generators of renewable energy collaborating. Cooperatives provide a democratic and collaborative approach, ensuring equal participation in decision-making among community members. Limited Liability Companies (LLC) offer a flexible business structure, combining elements of partnership and corporation, suitable for collaborative ventures.

Class 2: Collective Self-Consumption - Without Proximity Criteria

- **Organizational Forms: Foundations, Limited Liability Companies (LLC), Social Enterprises**
 - *Reasoning:* These classes focus on closed groups of generators and consumers. Foundations may support a common purpose. LLCs offer flexibility and limited liability.
 - Social enterprises combine commercial activities with a social mission.

Class 3: Collective Self-Consumption – Regional and Local

- **Organizational Forms: Cooperatives, Associations, Municipal Corporations, Partnerships, Community Land Trusts, Foundations**
 - *Reasoning:* Cooperatives and associations allow for a democratic and collaborative approach, ensuring equal say in decision-making. Regional and local self-consumption may benefit from local government involvement (Municipal Corporations), collaborative efforts (Partnerships), or community control over land use (Community Land Trusts).

Class 4: Collective Self-Consumption - Residential

- **Organizational Forms: Cooperatives, Associations, Community Benefit Societies, Foundations**
 - *Reasoning:* These classes involve residential scenarios where members share resources. Cooperatives and associations facilitate democratic control, while community benefit societies ensure a community-focused approach.

Class 5: Collective Self-Consumption - Energy Islands

- **Organizational Forms: Cooperatives, Municipal Corporations, Limited Liability Companies (LLC), Foundations**
 - *Reasoning:* For energy islands, cooperative structures could ensure community participation. Municipal corporations provide local control, and LLCs offer flexibility.

Class 6: Municipal Utilities and citizen-controlled Utilities

- **Organizational Forms: Municipal Corporations, Cooperatives**
 - *Reasoning:* Municipal utilities are often directly or indirectly controlled by local governments. This means local control and citizen involvement. Cooperatives allow for citizen participation and ownership. However, legal constraints could prevent (or make it really complex) for a public administration to be part of a cooperative.

Class 7: Collective Investment and Financial Aggregation – Renewable Energy

- **Organizational Forms: Cooperatives, Associations, Limited Liability Companies (LLC)**
 - *Reasoning:* Investment-focused classes can benefit from structures like cooperatives for joint ownership, associations for collaborative purposes, and LLCs for flexibility.

Class 8: Collective Investment and Financial Aggregation - Energy Efficiency

- **Organizational Forms: Cooperatives, Limited Liability Companies (LLC)**
 - *Reasoning:* Similar to Class 7, the organizational forms depend on the nature and scale of the projects.

Class 9: Collective Technical Service Provision

- **Organizational Forms: Social Enterprises, Foundations, Limited Liability Companies (LLC)**
 - *Reasoning:* Service provision classes can adopt structures that blend commercial activities with social or environmental missions.

Class 10: Smart Digital Systems

- **Organizational Forms: Limited Liability Companies (LLC), Partnerships**
 - *Reasoning:* Given the focus on digital systems and technologies, entities with a flexible and technology-driven approach might be suitable.

Keep in mind that the suitability of organizational forms may vary based on specific legal and regulatory contexts, and consulting legal experts is crucial for compliance. Also, these are general recommendations, and combinations or variations may apply based on specific project requirements.

6 Business Plan including Financial Plan and Timeline Plan

6.1 Context and Excel Tools

Context

Based on the business models and organizational forms that can be developed with the help of the Support Document, the next step for all possible energy communities is to develop 5- and 10-year business plans. These business plans include a financial plan and a timeline plan. Excel tools developed in ECOEMPOWER, namely “Financial Plan Template” and “Timeline Plan Template”, are simple tools to support the development of these aspects.

Excel tools – financial plan and timeline plan

The financial plan includes a revenue plan, costs plan, investment plan, financing plan, liquidity (cash-flow), and profit & loss plan. Below, screenshots of the Excel tools "Financial Plan Template" and "Timeline Template" are presented. The tools contain formulas that facilitate the calculation and visualization of those plans. The financial tool is designed to develop 20-year plans. For visibility reasons, the screenshots below only show 5 years. Thus the Excel tools can be used to create the 5- and 10-year business plan but can also be used for a 20-year business plan.

These tools include a quick overview, descriptions, and examples but are kept simple and general as financial planning and time planning are standard business procedures. People with standard business or management backgrounds will have similar tools. No new knowledge is created in those templates but they should be considered as additional support.

Application of tools – business plans for pilot sites

The tools together with the task to develop their own business plan have been sent to the OSSs and their pilot sites. OSSs can use these templates to clarify with interested to-be-established energy communities if financial plans and timeline plans of this quality already exist. Otherwise, new energy communities can use the tools to develop their financial and timeline plan but do not need to use them necessarily. Depending on the situation of the new energy communities it is clear that it might be more difficult for starting energy communities to estimate all requested numbers. Especially new energy communities will need some time to concretize their financial planning because it is being built in parallel to all other internal structures and therefore still confronted with many uncertainty factors.

Workshops and support

A workshop was conducted to clarify remaining questions and to further support the pilots with the usage of those tools. Through the feedback from OSSs and pilot sites, further aspects of the tool were improved and new indicators were included. In addition, at the request of the participants, the financial tool was expanded to include a 20-year horizon. An additional workshop is planned to intensify the exchange between OSSs and pilot sites in developing their business plans.

6.2 Financial Plan Tool

Purpose

With the EcoEmpower financial plan tool, young energy communities can create an initial version of a financial plan and quickly get an overview of the expected financial development in the first few years of the project.

Key components essential for a simple financial plan:

- Revenue Plan: outlining the revenue streams.
- Costs Plan: identifying direct costs, personnel costs, and other essential expenses.
- Investment Plan: overview of project investments and financial needs over time.
- Financing Plan: outlining capital requirements and potential funding sources.
- Liquidity Plan (Cash-Flow): project cash inflows and outflows to ensure liquidity.
- Profit & Loss Plan: assessing the expected profitability of the business.

These elements will give energy communities a solid foundation for managing their business finances. As the business grows, one can incorporate more detailed aspects for a more comprehensive financial plan.

While this simple tool is based on the typical presentations used in company accounting, it does not claim to be complete and cannot be used directly for the preparation of an annual balance sheet. It is necessary to refer to the support of local tax and accounting advisors.

Screenshots

The following screenshots should provide some insights into the tool. The Excel tools allow to develop a 20-year business plan. The figures only show a 5-year period for visibility reasons. Yellow/beige cells are the ones to enter information by the user. Figure 3 shows the spreadsheet to enter general information. Figures 4-9 show the spreadsheets for the mentioned plans for revenues, costs, liquidity, investments, financing, and profit & loss respectively. The included numbers are examples that can be ignored.

		general information
name of the organization		Example EC
start year of the plan		2024
operating months in the 1st year		12
productive (income) months in the 1st year		12
currency		€
trade tax rate		20%

Figure 3: Financial Plan Tool - General Information

Example EC



Revenues (net)		€				
		2024	2025	2026	2027	2028
Total revenues		400.000	840.000	1.490.000	1.500.000	1.510.000
Area / department	Comment					
Department-1		400.000	840.000	1.490.000	1.500.000	1.510.000
Project-1.1		150.000	260.000	520.000	530.000	540.000
xxx		100.000	200.000	250.000	250.000	250.000
xxx		50.000	60.000	70.000	80.000	90.000
xxx				200.000	200.000	200.000
xxx						
Project-1.2		250.000	580.000	970.000	970.000	970.000
xxx		150.000	400.000	600.000	600.000	600.000
xxx		100.000	100.000	250.000	250.000	250.000
xxx			80.000	120.000	120.000	120.000
xxx						
Project-1.3		0	0	0	0	0
xxx						
xxx						
xxx						
xxx						
Project-1.4		0	0	0	0	0
xxx						
xxx						
xxx						
xxx						
Department-2		0	0	0	0	0
Project-2.1		0	0	0	0	0
xxx						
xxx						

Figure 4: Financial Plan Tool - Revenues

Example EC

ECOEMPOWER 

Costs (net)		€				
		2024	2025	2026	2027	2028
Total costs		706.030	872.490	1.131.801	1.198.822	1.126.470
Type of costs	Comment					
Fixed personnel costs		472.680	509.418	600.245	644.705	692.109
director(s)		46.800	49.140	103.194	108.354	113.771
other executives		0	0	0	0	0
administration		0	0	0	0	0
Department-1		177.846	186.732	196.663	206.672	216.166
senior (1) Department-1		85.800	90.090	94.595	99.324	104.290
senior (2) Department-1		37.440	39.312	41.278	43.341	45.509
junior Department-1		54.600	57.330	60.197	63.206	66.367
Department-2		143.526	156.636	158.231	166.142	174.443
senior (1) Department-2		81.120	85.176	89.435	93.907	98.602
senior (2) Department-2		0	0	0	0	0
junior Department-2		62.400	65.520	68.796	72.236	75.848
Department-3		6	6	6	6	6
senior (1) Department-3		0	0	0	0	0
senior (2) Department-3		0	0	0	0	0
junior Department-3		0	0	0	0	0
other staff						
University graduates		54.600	57.330	60.197	63.206	66.367
other		0	0	0	0	0
Working students		24.960	32.760	41.278	50.565	60.678
Interns		24.960	32.760	41.278	50.565	60.678
External expenses (material, services etc.)		173.350	238.072	361.556	384.117	264.360
Department-1		60.000	126.000	223.500	225.000	75.500
Department-2		0	0	0	0	0
Department-3		0	0	0	0	0
other (e.g. management support)		9.360	0	0	10.835	22.754
Other operating expenses		103.990	112.072	138.056	148.282	166.106
Room costs + ancillary costs		23.634	25.471	30.012	32.235	34.605
Administrative overheads, consumables		23.634	25.471	30.012	32.235	34.605

Figure 5: Financial Plan Tool - Costs

Example EC

ECOEMPOWER 

Liquidity (Cash-Flow)		€				
		2024	2025	2026	2027	2028
Start of period		299.999	-6.031	-138.521	69.678	120.856
inflow: income		400.000	840.000	1.490.000	1.500.000	1.510.000
outflow: personal		-472.680	-509.418	-600.245	-644.705	-692.109
outflow: external services		-69.360	-126.000	-223.500	-235.835	-98.254
outflow: other operating costs		-103.990	-112.072	-138.056	-148.282	-166.106
outflow: capital costs		-60.000	-125.000	-170.000	-170.000	-170.000
outflow: capital payback			-100.000	-150.000	-250.000	-250.000
End of period		-6.031	-138.521	69.678	120.856	254.386

Figure 6: Financial Plan Tool - Liquidity

Example EC

Investments		€				
Area / department	Comment	2024	2025	2026	2027	2028
Investments accumulated		1.100.000	2.800.000	2.950.000	2.950.000	2.950.000
Investments per year		1.100.000	1.700.000	150.000	0	0
<i>Department-1</i>		1.100.000	1.700.000	150.000	0	0
<i>Project-1.1</i>		500.000	800.000	100.000	0	0
XXX		500.000		100.000		
XXX			300.000			
XXX			500.000			
XXX						
<i>Project-1.2</i>		600.000	900.000	50.000	0	0
XXX		600.000		50.000		
XXX			400.000			
XXX			500.000			
XXX						
<i>Project-1.3</i>		0	0	0	0	0
XXX						
XXX						
XXX						
XXX						
<i>Project-1.4</i>		0	0	0	0	0
XXX						
XXX						
XXX						
XXX						
<i>Department-2</i>		0	0	0	0	0
<i>Project-2.1</i>		0	0	0	0	0
XXX						
XXX						

Figure 7: Financial Plan Tool - Investments

Example EC

The investment plan outlines the necessary capital.
 This table contains in an open format sources of the capital (equity, loans, etc.).

Financing Plan		€				
type of financial source	conditions	2024	2025	2026	2027	2028

Figure 8: Financial Plan Tool - Financing

Example EC

Profit & Loss Plan							€
	2024	2025	2026	2027	2028	beyond	
Revenues	400.000	840.000	1.490.000	1.500.000	1.510.000	1.510.000	
Changes in inventories (see inventories in the balance sheet)							
Other own work capitalized							
Other operating income of which non-cash							
Overall performance	400.000	840.000	1.490.000	1.500.000	1.510.000	1.510.000	
Cost of materials	-69.360	-126.000	-223.500	-235.835	-98.254	-98.254	
Personnel expenses	-472.680	-509.418	-600.245	-644.705	-692.109	-692.109	
Depreciation and amortization (see balance sheet)							
Other operating expenses incl. other taxes of which non-cash	0	0	0	0	0	0	
Operating expenses	-542.040	-635.418	-823.745	-880.540	-790.364	-790.364	
Balance	-142.040	204.582	666.255	619.460	719.636	719.636	
Financial income	0	0	0	0	0	0	
Interest expense (investments, bank, etc.)	-60.000	-125.000	-170.000	-170.000	-170.000	0	
Interest income	0	0	0	0	0	0	
Net interest income	0	0	0	0	0	0	
Extraordinary result	0	0	0	0	0	0	
Financial and extraordinary result	0	0	0	0	0	0	
Earnings before taxes	-202.040	79.582	496.255	449.460	549.636	719.636	
Trade income tax							
Corporate income tax							
Net income for the year	-202.040	79.582	496.255	449.460	549.636	719.636	
+ Profit carried forward							
- Loss carryforwards							
+ Withdrawals from capital reserves							
- Allocation to capital reserves							
+ Withdrawals from retained earnings							
- Allocation to revenue reserves							
Retained earnings	-202.040	79.582	496.255	449.460	549.636	719.636	

Figure 9: Financial Plan Tool - Profit & Loss

6.3 Timeline Plan Tool

Purpose

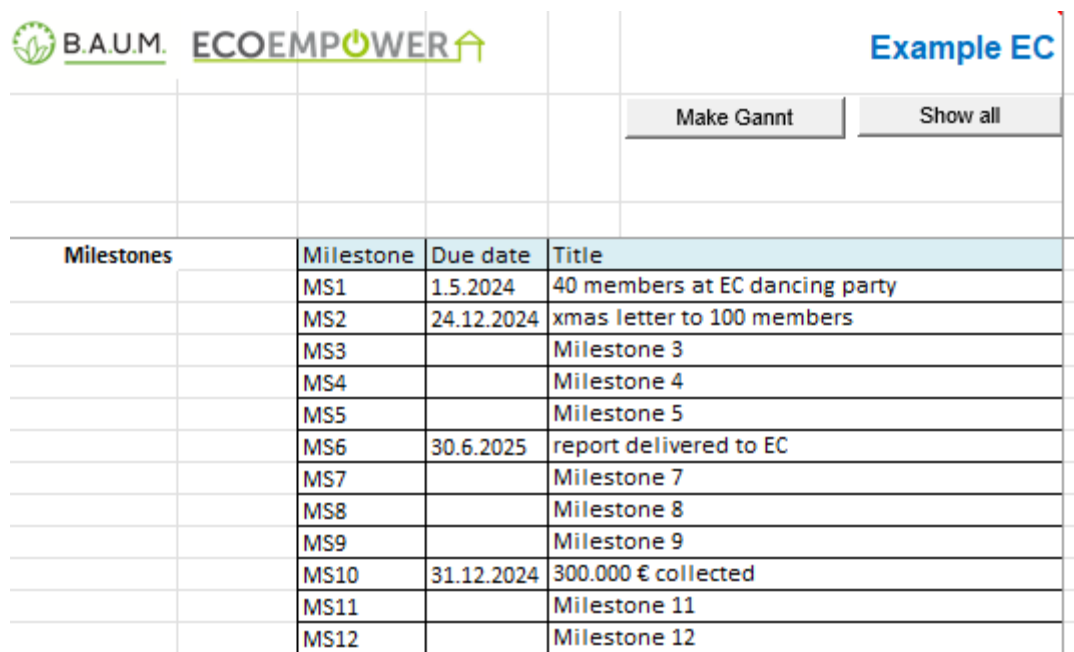
A timeline plan, also known as a project schedule, is a crucial component of project management for several reasons:

- Visualization of Tasks and Dependencies: A timeline plan provides a visual representation of the project’s tasks and their dependencies. This visual aid helps team members and stakeholders understand the chronological order of activities and how they relate to each other.
- Resource Allocation: It helps in the efficient allocation of resources, including human resources, equipment, and materials. By knowing when specific tasks are scheduled, project managers can assign resources appropriately, preventing overallocation or bottlenecks.
- Deadline Management: A timeline plan sets clear deadlines for each task and milestone. This helps in managing expectations and ensures that the project stays on track. Deadlines are essential for coordinating efforts and delivering the project within the specified time frame.
- Risk Identification and Management: The timeline plan allows project managers to identify potential risks and challenges early in the project. By recognizing critical paths and dependencies, teams can proactively address issues before they become major problems.

- **Communication and Collaboration:** A project schedule serves as a communication tool for the entire team. It provides a shared understanding of the project's timeline, milestones, and deliverables. This shared knowledge enhances collaboration and coordination among team members.

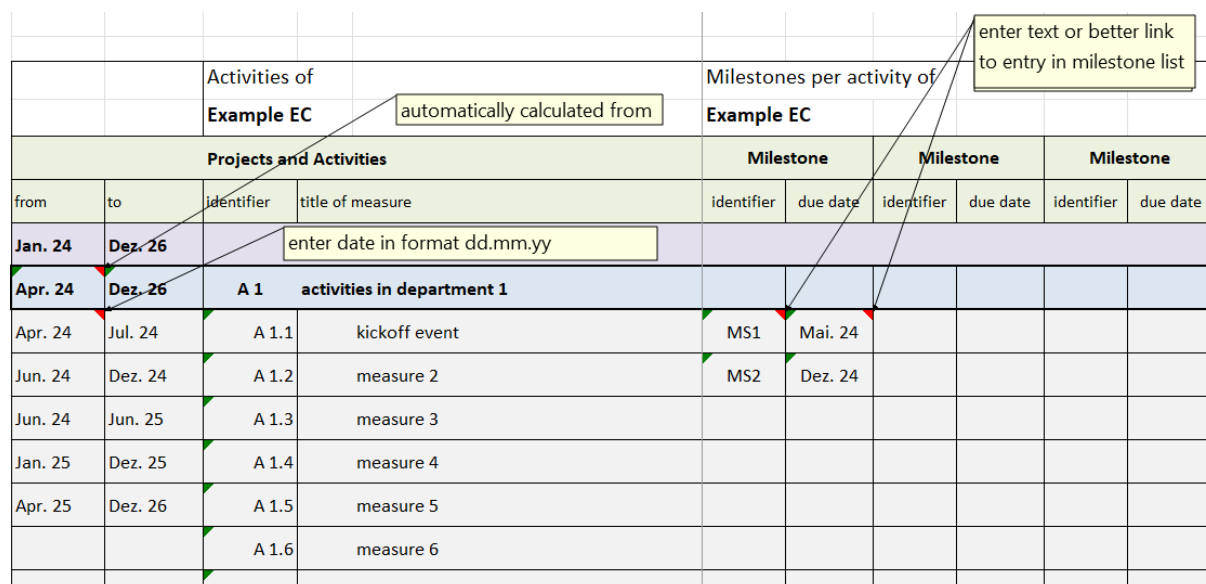
Screenshots

The following screenshots should provide some insights into the tool. Figure 10 shows the list to enter milestones and figure 11 the list to enter activities. Then milestones get allocated to certain activities. By using the button “Make Gantt”, the tool creates the resulting Gantt-chart (figure 12).



Milestones	Milestone	Due date	Title
	MS1	1.5.2024	40 members at EC dancing party
	MS2	24.12.2024	xmas letter to 100 members
	MS3		Milestone 3
	MS4		Milestone 4
	MS5		Milestone 5
	MS6	30.6.2025	report delivered to EC
	MS7		Milestone 7
	MS8		Milestone 8
	MS9		Milestone 9
	MS10	31.12.2024	300.000 € collected
	MS11		Milestone 11
	MS12		Milestone 12

Figure 10: Timeline Plan Tool - Milestones



Projects and Activities				Milestone		Milestone		Milestone	
from	to	identifier	title of measure	identifier	due date	identifier	due date	identifier	due date
Jan. 24	Dez. 26		enter date in format dd.mm.yy						
Apr. 24	Dez. 26	A 1	activities in department 1						
Apr. 24	Jul. 24	A 1.1	kickoff event	MS1	Mai. 24				
Jun. 24	Dez. 24	A 1.2	measure 2	MS2	Dez. 24				
Jun. 24	Jun. 25	A 1.3	measure 3						
Jan. 25	Dez. 25	A 1.4	measure 4						
Apr. 25	Dez. 26	A 1.5	measure 5						
		A 1.6	measure 6						
		A 1.7	measure 7						

Figure 11: Timeline Plan Tool – Activities

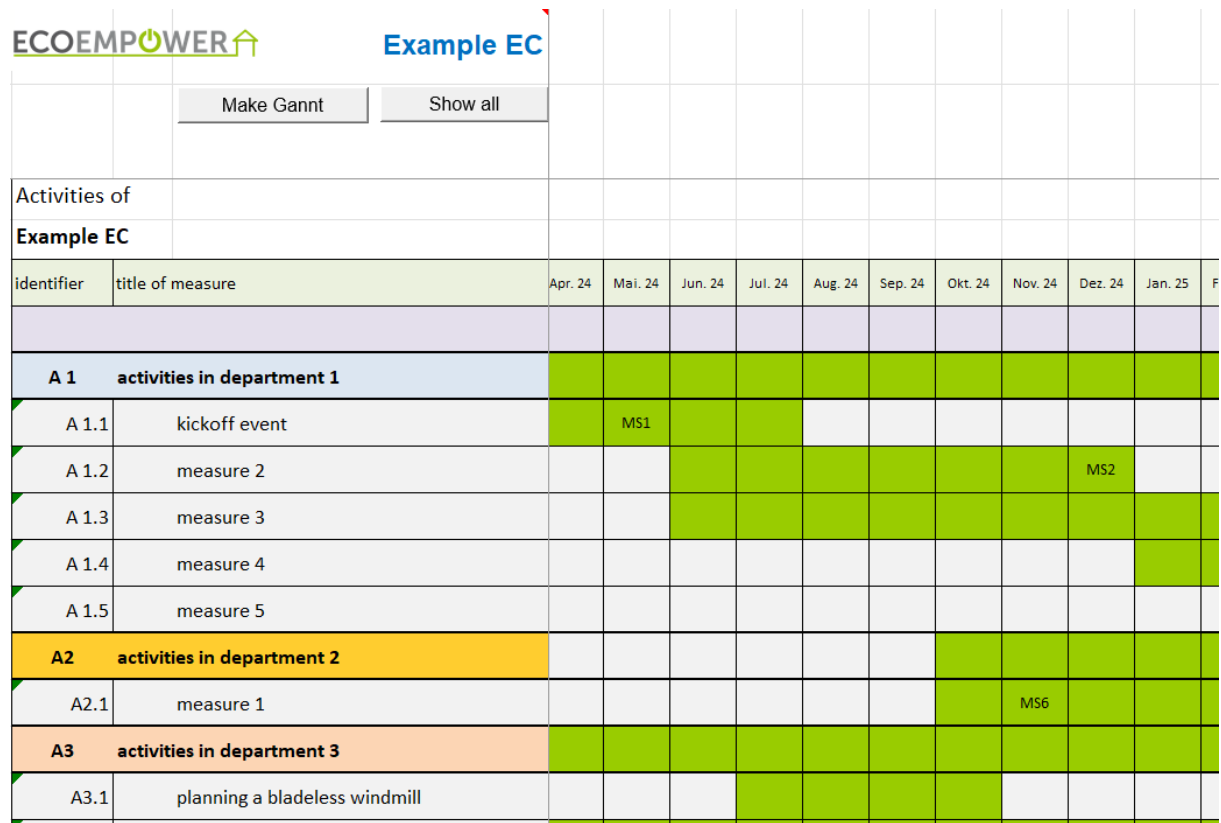


Figure 12: Timeline Plan Tool - Gantt Chart

7 Summary & Conclusion

With regard to the classification of organizational forms and their typical business models for collective and cooperative energy supply, an auxiliary document was developed as part of this work, which provides an overview of different ways in which a business model and organizational forms of energy communities can be structured. The document is intended to provide an overview and description of the basic success factors, classification of purposes, business models and options for organizational forms for energy communities. The business models are described using the Business Model Canvas methodology.

Various business strategies were discussed with the pilots and feasible models selected for implementation. The Support Document provided guidance to critically reflect on their own strategies and to identify and consider important hidden aspects of the business model. Together with each pilot, the leaders of this task are developing organizational and business strategies for a local energy community. The relevance of the document with different models was assessed by the OSS and the pilots. The organizational forms and business models in the Support Document have been improved based on the feedback from the pilot activities and will be further improved by the results of the multi-dialogue in T4.4.

OSSs and pilots reported that the Support Document was a useful tool for developing, critically reflecting on and improving their own business models and organizational forms. The document was able to inspire the pilots to expand and restructure the purpose or combination of purposes. The business models in canvas format provided a comprehensive list of elements that new energy communities need to consider when developing business strategies. In addition, the pilots appreciated the list of basic success factors, which highlights important aspects of establishing an energy community. The listing and description of organizational forms was useful, but is limited in its national application, as national laws and their regulatory frameworks differ considerably between Member States. This is also the reason why the supporting document is kept rather general on this point. It would be necessary to further develop this list for each Member State.

One-Stop-Shops can use the Support Document as a tool for advisory activities with new and existing energy communities. The document should not only be used within the projects, but also help actors and projects outside ECOEMPOWER to develop their business models and organizational forms.

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9 List of Abbreviations

ABBREVIATION	DEFINITION
C&D	Communication and dissemination
CDB	Communication & Dissemination Board
CINEA	(European) Climate, Infrastructure and Environment Executive Agency
DMP	Data Management Plan
DoA	Description of actions
DSO	Distribution System Operators
EC	European Commission
ESCO	Energy Service Company
IM	Innovation Manager
LoI	Letter of Intent
OSS	One Stop Shop
PB	Pilot Board
PC	Project Coordinator
PM	Project Manager
PMB	Project Management Board
PU	Public
QAP	Quality Assessment Plan
RES	Renewable Energy Sources
RP	Reporting Period
SE	Sensitive
SIP	Strategic Implementation Plan
ToC	Table of Contents
WP	Work Package
WPL	Work Package Leader

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Únor 2024

TITLE, DISCLAIMER AND EXECUTIVE SUMMARY (CZ)

KLASIFIKACE ORGANIZAČNÍCH FOREM PRO KOLEKTIVNÍ A
KOPERATIVNÍ DODÁVKY ENERGIE A JEJICH TYPICKÉ OBCHODNÍ
MODELY



The project ECOEMPOWER - ECOsystems EMPOWERing at regional and local scale supporting energy communities receives funding from the European Climate, Infrastructure and Environment Executive Agency (CINEA) under Grant Agreement n°101120775.



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SHRNUTÍ

Kontext

One-Stop-Shop (OSS) a národní poradní orgány jsou konfrontovány se vznikem mnoha nových energetických komunit s různými cíli a mnoha nezodpovězenými otázkami o obchodních modelech a organizačních formách. Samotné poradenské instituce však často postrádají kvalitní materiál, pokud jde o poradenství v oblasti obchodních modelů a organizačních forem. Jednoduše stále existuje málo jasných popisů a pokynů, jak klasifikovat a kategorizovat energetická společenství. Stále je také málo návodů a příkladů obchodních modelů, možných organizačních (právních) forem a jejich kombinací.

Problém

Energetické komunity jsou stále konfrontovány s nedostatkem pokynů a kvalitativních poradenských aktivit. Některé z nich selžou kvůli nepochopení elementárních faktorů úspěchu, které nebyly brány v úvahu. Jiné mají dobré podnikatelské nápady, ale nevidí celkový obraz nebo příležitosti spojit myšlenku s jinými cíli a účely. Přesto mají jiné potíže s výběrem a rozvojem robustních, udržitelných obchodních modelů a organizačních forem, které do sebe zapadají. Vypracování finančních a časových plánů není považováno za problém, problematická je však konkretizace obchodních modelů a organizačních forem.

Cíl

Tento výstup si klade za cíl předložit Podpůrný dokument (kapitoly 2-5 tohoto výstupu) obsahující přehled a popis základních faktorů úspěchu, klasifikaci účelů, obchodních modelů a organizačních forem pro energetické komunity. Tento dokument bude sloužit OSS jako nástroj pro jejich poradenskou činnost. OSS a jejich pilotní energetické komunity kriticky zhodnotily relevanci podpůrného dokumentu a poskytly zpětnou vazbu pro zlepšení. Nedílnou součástí tohoto výstupu je i Excel se základními šablonami „Šablona finančního plánu“ a „Šablona časové osy“. Tyto nástroje poskytují dodatečnou pomoc energetickým komunitám při vytváření jejich vlastních 5- až 10letých obchodních plánů. Finanční plánování a časové plánování vycházejí z obchodního modelu a organizační formy vyvinuté s podpůrným dokumentem.

Podpůrný dokument

Podpůrný dokument začíná obecnými faktory úspěchu pro energetické komunity. Pokouší se identifikovat základní aspekty úspěchu, které tvoří základ pro všechny typy energetických společenství. Dokument obsahuje komplexní seznam 19 základních faktorů úspěchu, jako je společný účel/poslání, zapojení komunity, efektivní komunikace a jasná definice projektu.

V další kapitole se podpůrný dokument pokouší objasnit odlišnou povahu energetických společenství klasifikací různých účelů. Dokument identifikuje a popisuje deset účelových kategorií, jako je kolektivní výroba a obchodování, kolektivní vlastní spotřeba v různých variantách a kolektivní investování a finanční agregace.

Kromě toho dokument zahrnuje verze obchodních modelů pomocí Business Model Canvas, pro každou třídu účelu obsahuje seznam prvků, které by mohly být relevantní pro každý typ účelu. Tento seznam prvků lze považovat za kontrolní seznam, který je třeba vzít v úvahu při vývoji konkrétních obchodních modelů. Kromě toho jsou diskutovány možné kombinace obchodních modelů.

Paralelně se hledají organizační (právní) formy, které by mohly být vhodné pro energetické komunity. Jsou uvedeny a diskutovány všechny možné organizační/právní formy. Práce však zůstává spíše teoretickou, neboť právní rámec a implementace předpisů v jednotlivých členských státech se značně liší. Dokument se snaží udržet obsah dostatečně obecný, aby byl platný pro každý členský stát, organizační formy musí být proto podrobně analyzovány pro každý členský stát. Tato kapitola také pojednává o souladu nebo nesouladu různých obchodních modelů a organizačních forem.

Aplikace podpůrného dokumentu – rozvoj obchodních strategií

S OSS a pilotními projekty byly projednány různé obchodní strategie, byly vybrány proveditelné modely pro implementaci a relevance podpůrného dokumentu. Podpůrný dokument umožnil pilotním projektům kritickou reflexi svých strategií a k identifikaci a zvážení důležitých skrytých aspektů jejich obchodního modelu. Organizační formy a obchodní modely v Podpůrném dokumentu byly vylepšeny na základě zpětné vazby z pilotních aktivit a budou dále zlepšeny při další práci na projektu.

Podnikatelský plán včetně finančního plánu a harmonogramu

Na základě obchodních modelů a organizačních forem, které lze vytvořit pomocí podpůrného dokumentu, je dalším krokem pro všechny možné energetické komunity vypracování 5- a 10letých podnikatelských plánů. Tyto obchodní plány zahrnují finanční plán a harmonogram. Excel nástroje vyvinuté v ECOEMPOWER, jmenovitě „Šablona finančního plánu“ a „Šablona plánu časové osy“, jsou jednoduché nástroje na podporu. Finanční plán zahrnuje plán výnosů, plán nákladů, investiční plán, plán financování, likviditu (cash-flow) a plán zisků a ztrát. Nástroje obsahují vzorce, které usnadňují výpočet a vizualizaci těchto plánů. Tyto nástroje zahrnují rychlý přehled, popisy a příklady, jsou jednoduché a obecné, protože finanční plánování a harmonogram jsou standardními obchodními postupy.

OSS mohou tyto šablony použít k diskusi se zainteresovanými energetickými komunitami, které mají být založeny, kde finanční plány a časové plány této kvality již existují. V opačném případě mohou nové energetické komunity používat nástroje k rozvoji svého finančního a časového plánu.

Kromě toho byl uspořádán workshop, který měl objasnit zbývající otázky a dále podpořit piloty při používání těchto nástrojů.

Závěr

Vyvinutý podpůrný dokument získal zpětnou vazbu od OSS a pilotních projektů. Všichni lokální partneři byli požádáni, aby vyplnili šablony založené na podpůrném dokumentu k prezentaci svého obchodního případu. Podpůrný dokument byl schopen inspirovat piloty k rozšíření, restrukturalizaci, či kombinaci účelů. Obchodní modely poskytly komplexní seznam prvků, které musí nové energetické komunity vzít v úvahu pro obchodní strategie. Pilotní projekty navíc ocenili seznam základních faktorů úspěchu pro vytváření energetické komunity. Výčet a popis organizačních forem byly užitečné i přes jejich obecnost. V rámci projektu se neustále pracuje na vytvoření přehledu právních rámců pro každý členský stát. Poskytované Excel nástroje pro finanční plánování a harmonogram jsou považovány za užitečné nástroje pro konkretizaci 5- a 10letých podnikatelských plánů.

Podpůrný dokument a nástroje Excel pro finanční a časové plánování mohou One-Stop-Shopy používat jako nástroje pro poradenskou činnost s novými i stávajícími energetickými komunitami. Podpůrný dokument a nástroje Excel by neměly být používány pouze v rámci projektů, ale měly by také pomáhat aktérům a projektům mimo ECOEMPOWER rozvíjet jejich obchodní modely, organizační formy, finanční a časové plány.

Februar 2024

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KLASSIFIZIERUNG DER ORGANISATIONSFORMEN FÜR KOLLEKTIVE
UND GENOSSENSCHAFTLICHE ENERGIEVERSORGUNG UND IHRER
TYPISCHEN GESCHÄFTSMODELLE



The project ECOEMPOWER - ECosystems EMPOWERing at regional and local scale supporting energy communities receives funding from the European Climate, Infrastructure and Environment Executive Agency (CINEA) under

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EXECUTIVE SUMMARY - KURZFASSUNG

Der Kontext:

One-Stop-Shops und nationale Beratungseinrichtungen sind mit dem Entstehen vieler neuer Energiegemeinschaften mit unterschiedlichen Zielsetzungen und vielen offenen Fragen zu Geschäftsmodellen und Organisationsformen konfrontiert. Den Beratungsinstitutionen selbst fehlt es jedoch oft an qualitativ hochwertigem Material, wenn es um die Beratung zu Geschäftsmodellen und Organisationsformen geht. Es gibt einfach noch zu wenig klare Beschreibungen und Richtlinien, wie die Zwecke von Energiegemeinschaften einzuordnen und zu kategorisieren sind. Auch gibt es noch wenig Anleitungen und Beispiele zu Geschäftsmodellen, den möglichen Organisations(rechts)formen und deren Kombinationen.

Das Problem:

Energiegemeinschaften tun sich schwer, weil es an Leitlinien und qualitativer Beratung mangelt. Einige von ihnen scheitern am mangelnden Verständnis elementarer Erfolgsfaktoren, die nicht berücksichtigt wurden. Andere haben gute Geschäftsideen, sehen aber nicht das große Ganze oder die Möglichkeiten, die Idee mit anderen Zielen und Zwecken zu kombinieren. Wieder andere haben Schwierigkeiten, robuste, nachhaltige Geschäftsmodelle und Organisationsformen so auszuwählen und zu entwickeln, dass sie auch zueinander passen. Die Entwicklung von Finanz- und Zeitplänen wird nicht als Problem betrachtet, sondern als ein notwendiger Aspekt zur Konkretisierung der Geschäftsmodelle und Organisationsformen.

Zielsetzung:

In diesem Deliverable wird ein Unterstützungsdokument (Support Document) in den Kapitel 2-5 präsentiert. Darin findet man einen Überblick und eine Beschreibung der grundlegenden Erfolgsfaktoren, der Klassifizierung von Unternehmenszwecken, der Geschäftsmodelle und der Organisationsformen für Energiegemeinschaften. Dieses Dokument wird den One-Stop-Shops als Hilfsmittel für ihre Beratungstätigkeit dienen. Die OSS und ihre Pilot-Energiegemeinschaften haben die Relevanz des Unterstützungsdokuments (Support Document) kritisch bewertet und Feedback zur Verbesserung gegeben. Darüber hinaus enthält dieses Dokument Screenshots und Strukturen von Excel-Tools für eine "Finanzplan-Vorlage" und eine "Zeitplan-Vorlage". Diese Tools bieten zusätzliche Unterstützung für Energiegemeinschaften bei der Entwicklung ihrer eigenen 5- bis 10-Jahres-Geschäftspläne, erheben aber nicht den Anspruch, neues Wissen zu enthalten. Die Finanzplanung und die Zeitplanung bauen auf dem Geschäftsmodell und der Organisationsform auf, die mit dem Unterstützungsdokument (Support Document) entwickelt wurden.

Unterstützungsdokument:

Das Unterstützungsdokument (Support Document) beginnt mit allgemeinen Erfolgsfaktoren für Energiegemeinschaften. Es wird versucht, grundlegende Erfolgsaspekte zu identifizieren, die die Basis für alle

Arten von Energiegemeinschaften bilden. Das Dokument enthält eine umfassende Liste von 19 grundlegenden Erfolgsfaktoren, wie z. B. ein gemeinsames Ziel/eine gemeinsame Mission, das Engagement der Gemeinschaft, eine effektive Kommunikation und eine klare Definition der Projektbeschränkungen.

Im nächsten Kapitel versucht das Unterstützungsdokument, die verschiedenen Arten von Energiegemeinschaften zu verdeutlichen, indem es die verschiedenen Zwecke klassifiziert. Das Dokument identifiziert und beschreibt zehn Zweckkategorien, wie z. B. kollektive Erzeugung und Handel, kollektiver Eigenverbrauch in verschiedenen Varianten sowie kollektive Investitionen und finanzielle Aggregation.

Darüber hinaus zeigt das Unterstützungsdokument (Support Dokument) Versionen von Geschäftsmodellen für jede Zweckklasse unter Verwendung des Business Model Canvas-Formats. Das vorgestellte Business Models Canvas für jede Zweckklasse enthält eine Liste von Elementen, die für jeden Zweck relevant sein könnten. Diese Liste von Elementen kann als Checkliste betrachtet werden, die bei der Entwicklung spezifischer konkreter Geschäftsmodelle zu berücksichtigen ist. Darüber hinaus werden mögliche Kombinationen von Geschäftsmodellen diskutiert.

Parallel dazu wird nach (rechtlichen) Organisationsformen gesucht, die für Energiegemeinschaften geeignet sein könnten. Es werden alle möglichen Organisations-/Rechtsformen aufgelistet und diskutiert. Allerdings bleibt das Dokument eher theoretisch, da der rechtliche Rahmen und die Umsetzung der Regelungen in den einzelnen Mitgliedstaaten sehr unterschiedlich sind. Das Dokument versucht, den Inhalt so allgemein zu halten, dass er für jeden Mitgliedstaat gültig ist. Die rechtliche Umsetzung dieser Organisationsformen muss daher für jeden Mitgliedstaat im Detail analysiert werden. In diesem Kapitel wird auch die Kompatibilität zwischen verschiedenen Geschäftsmodellen und Organisationsformen erörtert.

Anwendung des Unterstützungsdokuments (Support Document) - Entwicklung von Geschäftsstrategien

Mit den OSS und den Piloten wurden verschiedene Geschäftsstrategien diskutiert, machbare Modelle für die Umsetzung ausgewählt und die Relevanz des Unterstützungsdokuments (Support Document) mit einer "Feedback-Vorlage" bewertet. Das Unterstützungsdokument leitete die Piloten dazu an, ihre Strategien kritisch zu reflektieren und wichtige versteckte Aspekte ihres Geschäftsmodells zu identifizieren und zu berücksichtigen. Die Organisationsformen und Geschäftsmodelle im Unterstützungsdokument wurden auf der Grundlage des Feedbacks aus den Pilotaktivitäten verbessert und werden durch die Ergebnisse des Multi-Dialogs in der weiteren Arbeit des Projekts weiter verbessert.

Geschäftsplan einschließlich Finanzplan und Zeitplan:

Auf der Grundlage der Geschäftsmodelle und Organisationsformen, die mit Hilfe des Unterstützungsdokuments (Support Document) entwickelt werden können, besteht der nächste Schritt für alle möglichen Energiegemeinschaften darin, 5- und 10-Jahres-Geschäftspläne zu entwickeln. Diese Geschäftspläne umfassen einen Finanzplan und einen Zeitplan. Die im Rahmen von ECOEMPOWER entwickelten Excel-Tools, nämlich die „Vorlage Finanzplan“ und die „Vorlage Zeitplan“, sind einfache Tools zur Unterstützung der Entwicklung dieser Aspekte. Der Finanzplan umfasst einen Einnahmenplan, einen Kostenplan, einen Investitionsplan, einen Finanzierungsplan, einen Liquiditätsplan (Cash-Flow) und einen Gewinn- und Verlustplan. Die Tools enthalten Formeln, die die Berechnung und Visualisierung dieser Pläne erleichtern. Diese Tools geben einen schnellen Überblick, enthalten Beschreibungen und Beispiele, sind aber einfach und allgemein gehalten, da Finanzplanung und Zeitplanung Standard-Geschäftsverfahren sind. Personen mit normalem BWL oder Managementhintergrund werden ähnliche Werkzeuge verwenden. Diese Tools bieten kein neues Wissen, aber sie können als zusätzliche Unterstützung betrachtet werden.

Die OSS können diese Excel-Tools verwenden, um mit neu zu gründenden Energiegemeinschaften abzuklären, ob Finanz- und Zeitpläne in einer ähnlichen Qualität vorliegen. Andernfalls können Energiegemeinschaften diese Tools nutzen, um ihren Finanz- und Zeitplan zu entwickeln. Abhängig von der Situation von neuen Energiegemeinschaften ist es verständlich, dass die Schätzung der erforderlichen Zahlen für diese schwieriger sein kann. Neue Energiegemeinschaften werden einige Zeit benötigen, um ihre Finanzpläne zu konkretisieren, da diese parallel zu allen anderen internen Strukturen aufgebaut werden und daher noch mit vielen Unsicherheitsfaktoren konfrontiert sind.

Darüber hinaus wurde ein Workshop durchgeführt, um noch offene Fragen bezüglich der Excel-Tools zu klären und die Piloten bei der Nutzung weiter zu unterstützen.

Schlussfolgerung:

Das entwickelte Unterstützungsdokument (Support Document) wurde von den OSS und Piloten des Projekts als nützliches Instrument zur Entwicklung, kritischen Reflexion und Verbesserung ihrer Geschäftsmodelle und Organisationsformen bewertet. Alle Piloten wurden gebeten, Vorlagen auf der Grundlage des Unterstützungsdokuments auszufüllen, um ihren eigenen Business Case zu präsentieren. Das Unterstützungsdokument konnte die Piloten dazu inspirieren, den Zweck oder die Kombination von Zwecken zu erweitern und umzustrukturieren. Die Geschäftsmodelle im Canvas-Format boten eine umfassende Liste von Elementen, die neue Energiegemeinschaften für Geschäftsstrategien berücksichtigen können. Darüber hinaus schätzten die Piloten die Liste der grundlegenden Erfolgsfaktoren, die wichtige Aspekte bei der Gründung einer Energiegemeinschaft hervorhebt. Die Auflistung und Beschreibung der Organisationsformen war nützlich, aber in ihrer nationalen Anwendung begrenzt, da sich die nationalen Gesetze und deren Regulierungsrahmen von Mitgliedstaat zu Mitgliedstaat erheblich unterscheiden. Im Rahmen des Projekts wird derzeit daran gearbeitet, einen Überblick über die rechtlichen Rahmenbedingungen in den einzelnen Mitgliedstaaten zu erstellen. Die bereitgestellten Excel-Tools für die Finanz- und Zeitplanung werden als nützliche Instrumente zur Konkretisierung von 5- und 10-Jahres-Geschäftsplänen angesehen.

Das Unterstützungsdokument und die Excel-Tools für die Finanz- und Zeitplanung können von One-Stop-Shops als Hilfsmittel für Beratungsaktivitäten mit neuen und bestehenden Energiegemeinschaften genutzt werden. Das Unterstützungsdokument und die Excel-Tools sollten nicht nur innerhalb der Projekte verwendet werden, sondern auch Akteuren und Projekten außerhalb von ECOEMPOWER helfen, ihre Geschäftsmodelle, Organisationsformen, Finanz- und Zeitpläne zu entwickeln.

Février 2024

TITLE, DISCLAIMER AND EXECUTIVE SUMMARY (FR)

CLASSIFICATION DES FORMES ORGANISATIONNELLES POUR LA
FOURNITURE COLLECTIVE ET COOPÉRATIVE D'ÉNERGIE ET LEURS
MODÈLES ÉCONOMIQUES TYPES



The project ECOEMPOWER - ECosystems EMPOWERing at regional and local scale supporting energy communities receives funding from the European Climate, Infrastructure and Environment Executive Agency (CINEA) under

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RÉSUMÉ EXÉCUTIF

Contexte:

Les guichets uniques et les organes consultatifs nationaux sont confrontés à l'émergence de nombreuses nouvelles communautés d'énergie ayant des objectifs différents et de nombreuses questions sans réponse sur les modèles économiques et les formes organisationnelles. Cependant, les institutions consultatives elles-mêmes manquent souvent de matériel de qualité lorsqu'il s'agit de conseiller sur les modèles économiques et les formes organisationnelles. Il existe encore peu d'instructions et de directives claires sur la manière de classer et de catégoriser les objectifs des communautés d'énergie. Il existe également encore peu d'instructions et d'exemples sur les modèles économiques, les formes organisationnelles (juridiques) possibles et leurs combinaisons.

Problème:

Les communautés d'énergie rencontrent des difficultés en raison d'un manque de lignes directrices et de conseils. Certaines d'entre elles échouent en raison d'un manque de compréhension des facteurs de succès de bases qui n'ont pas été pris en compte. D'autres ont de bonnes idées en termes de modèles économiques mais ne voient pas la situation dans son ensemble ou les possibilités de combiner ces idées avec d'autres objectifs et finalités. D'autres encore ont du mal à choisir et à développer des modèles économiques et des formes organisationnelles robustes et durables qui s'articulent bien ensemble. L'élaboration de plans financiers et de calendriers d'actions est donc un aspect nécessaire pour concrétiser les modèles économiques et les formes organisationnelles.

Objectif:

Ce livrable vise à présenter un Document Support (Chapitres 2 à 5 de ce livrable) qui offre une vue d'ensemble et une description des facteurs de succès de base, une classification des objectifs, des modèles économiques et des formes organisationnelles pour les communautés d'énergie. Ce document sera un outil utile pour les guichets uniques dans leurs activités de conseil. Les guichets uniques et les communautés d'énergie pilotes ont évalué de manière critique la pertinence du Document Support et ont fourni des retours pour l'améliorer. De plus, ce livrable inclut des captures d'écran et des structures de modèles Excel pour un "Modèle de Plan Financier" et un "Modèle de Calendrier d'Action". Ces outils sont un soutien supplémentaire pour les communautés d'énergie pour leur permettre d'élaborer leurs propres plans financiers sur 5 à 10 ans, mais ils ne prétendent pas introduire de nouvelles connaissances économiques. Le plan financier et le calendrier d'action s'appuient sur le modèle économique et la forme organisationnelle développés avec le Document Support.

Document Support:

Le document support commence par présenter les facteurs de réussite généraux pour les communautés d'énergie. Il identifie les aspects fondamentaux de réussite qui constituent la base de tous les types de communautés d'énergie. Le document contient une liste exhaustive de 19 facteurs de réussite fondamentaux, tels que l'objectif/la mission commun(e), l'engagement communautaire, une communication efficace et une définition claire des contraintes du projet.

Dans le chapitre suivant, le document support clarifie la nature des différents types de communautés d'énergie en les classant par objectifs. Le document identifie et décrit dix catégories d'objectifs, telles que la production et la vente collective, l'autoconsommation collective dans différentes variantes, l'investissement collectif et l'agrégation financière.

En outre, le document support présente des versions de modèles économiques pour chaque catégorie d'objectifs en utilisant le format « Business Model Canvas ». Le Business Model Canvas présenté pour chaque catégorie d'objectifs contient une liste d'éléments qui pourraient être pertinents pour chaque type d'objectif. Cette liste d'éléments peut être considérée comme une liste de contrôle à prendre en compte lors de l'élaboration de modèles économiques concrets et spécifiques. Par ailleurs, les combinaisons possibles de modèles économiques sont présentées.

En parallèle, le document support explore les formes organisationnelles (juridiques) qui pourraient convenir aux communautés d'énergie. Toutes les formes organisationnelles/juridiques possibles sont énumérées et discutées. Le document reste toutefois assez théorique, car le cadre juridique et la mise en œuvre des réglementations dans les différents États membres diffèrent considérablement. Le document reste donc suffisamment général afin d'être valable pour chaque État membre. La mise en œuvre juridique de ces formes organisationnelles doit donc être analysée en détail pour chaque État membre. Ce chapitre traite également de la conformité ou de la non-conformité des différents modèles d'entreprise et formes d'organisation.

ΦΕΒΡΟΥΑΡΙΟΣ 2024

TITLE, DISCLAIMER AND EXECUTIVE SUMMARY (GR)

ΤΑΞΙΝΟΜΗΣΗ ΤΩΝ ΟΡΓΑΝΩΤΙΚΩΝ ΜΟΡΦΩΝ ΣΥΛΛΟΓΙΚΗΣ ΚΑΙ
ΣΥΝΕΤΑΙΡΙΣΤΙΚΗΣ ΠΑΡΟΧΗΣ ΕΝΕΡΓΕΙΑΣ ΚΑΙ ΤΩΝ ΤΥΠΙΚΩΝ
ΕΠΙΧΕΙΡΗΜΑΤΙΚΩΝ ΜΟΝΤΕΛΩΝ ΤΟΥΣ



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Grant Agreement n°101120775.



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ΠΕΡΙΛΗΨΗ

Περιεχόμενο:

Τα καταστήματα μιας στάσης (ΚΜΣ) και οι εθνικοί συμβουλευτικοί φορείς έρχονται αντιμέτωποι με την εμφάνιση πολλών νέων ενεργειακών κοινοτήτων με διαφορετικούς στόχους και πολλά αναπάντητα ερωτήματα σχετικά με τα επιχειρηματικά μοντέλα και τις οργανωτικές μορφές. Ωστόσο, οι ίδιοι οι συμβουλευτικοί φορείς συχνά δεν διαθέτουν υλικό υψηλής ποιότητας όταν πρόκειται να παράσχουν συμβουλές σχετικά με επιχειρηματικά μοντέλα και οργανωτικές μορφές. Υπάρχουν ακόμη λίγες σαφείς περιγραφές και κατευθυντήριες γραμμές για τον τρόπο ταξινόμησης και κατηγοριοποίησης των σκοπών των ενεργειακών κοινοτήτων. Υπάρχουν επίσης ακόμη λίγες οδηγίες και παραδείγματα σχετικά με τα επιχειρηματικά μοντέλα, τις πιθανές οργανωτικές (νομικές) μορφές και τους συνδυασμούς τους.

Πρόβλημα:

Οι ενεργειακές κοινότητες αντιμετωπίζουν δυσκολίες λόγω έλλειψης κατευθυντήριων γραμμών και ποιοτικών συμβουλευτικών δραστηριοτήτων. Ορισμένες από αυτές αποτυγχάνουν λόγω της έλλειψης κατανόησης των στοιχειωδών παραγόντων επιτυχίας που δεν έχουν ληφθεί υπόψη. Άλλες έχουν καλές επιχειρηματικές ιδέες αλλά δεν βλέπουν το μεγάλο πλαίσιο ή τις ευκαιρίες να συνδυάσουν την ιδέα με άλλους στόχους και σκοπούς. Άλλες εξακολουθούν να αντιμετωπίζουν δυσκολίες στην επιλογή και ανάπτυξη εύρωστων, βιώσιμων επιχειρηματικών μοντέλων και οργανωτικών μορφών που ταιριάζουν μεταξύ τους. Η ανάπτυξη οικονομικών σχεδίων και χρονοδιαγραμμάτων δεν θεωρείται πρόβλημα αλλά απαραίτητη πτυχή για τη συγκεκριμενοποίηση των επιχειρηματικών μοντέλων και των οργανωτικών μορφών.

Στόχος:

Αυτό το παραδοτέο έχει ως στόχο την παρουσίαση ενός Εγγράφου Υποστήριξης (Κεφάλαια 2-5 αυτού του παραδοτέου) που περιλαμβάνει μια επισκόπηση και περιγραφή των βασικών παραγόντων επιτυχίας, κατάταξη των σκοπών, τα επιχειρηματικά μοντέλα και τις οργανωτικές μορφές για τις ενεργειακές κοινότητες. Αυτό το έγγραφο θα λειτουργήσει ως εργαλείο για τα ΚΜΣ στις συμβουλευτικές τους δραστηριότητες. Τα ΚΜΣ και οι πιλοτικές ενεργειακές κοινότητες αξιολόγησαν κριτικά τη συνάφεια του Εγγράφου Υποστήριξης και παρείχαν ανατροφοδότηση για βελτίωση. Επιπλέον, το παρόν παραδοτέο παρουσιάζει στιγμιότυπα οθόνης και δομές εργαλείων Excel για ένα "Πρότυπο χρηματοοικονομικού σχεδίου" και ένα "Πρότυπο Χρονοδιαγράμματος". Τα εργαλεία αυτά παρέχουν πρόσθετη βοήθεια στις ενεργειακές κοινότητες για την ανάπτυξη των δικών τους 5-έως 10ετών επιχειρηματικών σχεδίων, αλλά δεν ισχυρίζονται ότι περιέχουν νέες επιχειρηματικές γνώσεις. Ο οικονομικός σχεδιασμός και ο χρονοπρογραμματισμός βασίζονται στο επιχειρηματικό μοντέλο και την οργανωτική μορφή που αναπτύχθηκε με το έγγραφο υποστήριξης.

Έγγραφο υποστήριξης:

Το έγγραφο στήριξης ξεκινά με γενικούς παράγοντες επιτυχίας για τις ενεργειακές κοινότητες. Επιχειρεί να προσδιορίσει τις θεμελιώδεις πτυχές της επιτυχίας που αποτελούν τη βάση για όλους τους τύπους ενεργειακών κοινοτήτων. Το έγγραφο περιέχει έναν ολοκληρωμένο κατάλογο 19 βασικών παραγόντων επιτυχίας, όπως ο κοινός σκοπός/αποστολή, η δέσμευση της κοινότητας, η αποτελεσματική επικοινωνία και ο σαφής ορισμός των περιορισμών του έργου.

Στο επόμενο κεφάλαιο, το έγγραφο υποστήριξης επιχειρεί να αποσαφηνίσει τη διαφορετική φύση των ενεργειακών κοινοτήτων με την ταξινόμηση των διαφορετικών σκοπών. Το έγγραφο προσδιορίζει και περιγράφει δέκα κατηγορίες σκοπών, όπως η συλλογική παραγωγή και εμπορία, η συλλογική ιδιοκατανάλωση σε διάφορες παραλλαγές και η συλλογική επένδυση και η οικονομική συγκέντρωση.

Επιπλέον, το έγγραφο υποστήριξης παρουσιάζει εκδόσεις επιχειρηματικών μοντέλων για κάθε κατηγορία σκοπού χρησιμοποιώντας τη μορφή «Καμβάς Επιχειρηματικού Μοντέλου». Ο παρουσιαζόμενος καμβάς επιχειρηματικών μοντέλων για κάθε κατηγορία σκοπού περιέχει έναν κατάλογο στοιχείων που θα μπορούσαν να είναι σχετικά με κάθε τύπο σκοπού. Αυτός ο κατάλογος στοιχείων μπορεί να θεωρηθεί ως κατάλογος ελέγχου που πρέπει να ληφθεί υπόψη κατά την ανάπτυξη συγκεκριμένων επιχειρηματικών μοντέλων. Επιπλέον, συζητούνται πιθανοί συνδυασμοί επιχειρηματικών μοντέλων.

Εφαρμογή του εγγράφου υποστήριξης – ανάπτυξη επιχειρηματικών στρατηγικών

Με τα ΚΜΣ και τους πιλότους συζητήθηκαν διάφορες επιχειρηματικές στρατηγικές, επιλέχθηκαν εφικτά μοντέλα για υλοποίηση και η καταλληλότητα του εγγράφου υποστήριξης αξιολογήθηκε με ένα "Πρότυπο Ανατροφοδότησης". Το έγγραφο υποστήριξης καθοδήγησε τους πιλότους να αξιολογήσουν κριτικά τις στρατηγικές τους και να εντοπίζουν και να λάβουν υπόψη σημαντικές κρυφές πτυχές του επιχειρηματικού τους μοντέλου. Οι οργανωτικές μορφές και τα επιχειρηματικά μοντέλα στο έγγραφο υποστήριξης έχουν βελτιωθεί βάσει των ανατροφοδοτήσεων από τις πιλοτικές δραστηριότητες και θα βελτιωθούν περαιτέρω από τα αποτελέσματα του διαλόγου στις περαιτέρω ενέργειες του έργου.

Επιχειρηματικό σχέδιο, συμπεριλαμβανομένου του οικονομικού σχεδίου και του χρονοδιαγράμματος:

Με βάση τα επιχειρηματικά μοντέλα και τις οργανωτικές μορφές που μπορούν να αναπτυχθούν με τη βοήθεια του εγγράφου υποστήριξης, το επόμενο βήμα για όλες τις πιθανές ενεργειακές κοινότητες είναι η ανάπτυξη 5- και 10ετών επιχειρηματικών σχεδίων. Αυτά τα επιχειρηματικά σχέδια περιλαμβάνουν ένα οικονομικό σχέδιο και ένα σχέδιο χρονοδιαγράμματος. Τα εργαλεία Excel που αναπτύχθηκαν στο ECOEMPOWER, δηλαδή το "Πρότυπο χρηματοοικονομικού σχεδίου" και το "Πρότυπο χρονοδιαγράμματος", είναι απλά εργαλεία για την υποστήριξη της ανάπτυξης αυτών των πτυχών. Το οικονομικό σχέδιο περιλαμβάνει σχέδιο εσόδων, σχέδιο δαπανών, σχέδιο επενδύσεων, σχέδιο χρηματοδότησης, σχέδιο ρευστότητας (ταμειακών ροών) και σχέδιο κερδών και ζημιών. Τα εργαλεία περιέχουν τύπους που διευκολύνουν τον υπολογισμό και την απεικόνιση αυτών των σχεδίων. Τα εργαλεία αυτά περιλαμβάνουν μια γρήγορη επισκόπηση, περιγραφές και παραδείγματα, αλλά παραμένουν απλά και γενικά, καθώς ο χρηματοοικονομικός σχεδιασμός και ο χρονικός προγραμματισμός αποτελούν συνήθεις επιχειρηματικές διαδικασίες. Τα άτομα με τυπικό επιχειρηματικό ή διοικητικό υπόβαθρο θα έχουν παρόμοια εργαλεία. Δεν δημιουργούνται νέες γνώσεις σε αυτά τα πρότυπα, αλλά θα πρέπει να θεωρηθούν ως πρόσθετη υποστήριξη.

Τα ΚΜΣ μπορούν να χρησιμοποιήσουν αυτά τα πρότυπα για να διευκρινίσουν με τις ενδιαφερόμενες προς ίδρυση ενεργειακές κοινότητες αν υπάρχουν ήδη οικονομικά σχέδια και χρονοδιαγράμματα αυτής της ποιότητας. Διαφορετικά, οι νέες ενεργειακές κοινότητες μπορούν να χρησιμοποιήσουν τα εργαλεία για να αναπτύξουν το οικονομικό τους σχέδιο και το χρονοδιάγραμμά τους, αλλά δεν χρειάζεται να τα χρησιμοποιήσουν απαραίτητα. Ανάλογα με την κατάσταση των νέων ενεργειακών κοινοτήτων, είναι σαφές ότι μπορεί να είναι πιο δύσκολο για τις υπό ανάπτυξη ενεργειακές κοινότητες να εκτιμήσουν όλους τους ζητούμενους αριθμούς. Ιδιαίτερα οι νέες ενεργειακές κοινότητες θα χρειαστούν κάποιο χρονικό διάστημα για να συγκεκριμενοποιήσουν τον οικονομικό τους σχεδιασμό, επειδή αυτός αναπτύσσεται παράλληλα με όλες τις άλλες εσωτερικές δομές και επομένως εξακολουθεί να αντιμετωπίζει πολλούς παράγοντες αβεβαιότητας.

Επιπλέον, διεξήχθη ένα σεμινάριο για την αποσαφήνιση των εναπομεινάντων ερωτημάτων και την περαιτέρω υποστήριξη των πιλότων στη χρήση των εν λόγω εργαλείων..

Συμπεράσματα:

Το έγγραφο υποστήριξης που αναπτύχθηκε αξιολογήθηκε από τα ΚΜΣ και τους πιλότους του έργου ως ένα χρήσιμο εργαλείο για την ανάπτυξη, την κριτική ανασκόπηση και τη βελτίωση των επιχειρηματικών τους μοντέλων και των οργανωτικών τους μορφών. Όλοι οι πιλότοι κλήθηκαν να συμπληρώσουν πρότυπα με βάση το έγγραφο υποστήριξης για να παρουσιάσουν την επιχειρηματική τους υπόθεση. Το έγγραφο υποστήριξης μπόρεσε να εμπνεύσει τους πιλότους να επεκτείνουν και να αναδιαρθρώσουν τον σκοπό ή τον συνδυασμό των σκοπών. Τα επιχειρηματικά μοντέλα σε μορφή καμβά παρείχαν έναν ολοκληρωμένο κατάλογο των στοιχείων που πρέπει να εξετάσουν οι νέες ενεργειακές κοινότητες για τις επιχειρηματικές τους στρατηγικές. Επιπλέον, οι πιλότοι εκτίμησαν τον κατάλογο των βασικών παραγόντων επιτυχίας, ο οποίος υπογραμμίζει σημαντικές πτυχές της ίδρυσης μιας ενεργειακής κοινότητας. Η καταγραφή και η περιγραφή των οργανωτικών μορφών ήταν χρήσιμες αλλά περιορισμένες ως προς την εθνική τους εφαρμογή, καθώς οι εθνικές νομοθεσίες και τα ρυθμιστικά τους πλαίσια διαφέρουν σημαντικά μεταξύ των κρατών μελών. Το έργο συνεχίζει να εργάζεται για τη δημιουργία μιας επισκόπησης των νομικών πλαισίων για κάθε κράτος μέλος. Τα παρεχόμενα εργαλεία Excel για οικονομικό σχεδιασμό και χρονικό προγραμματισμό θεωρούνται χρήσιμα εργαλεία για τη συγκεκριμενοποίηση 5- και 10ετών επιχειρηματικών σχεδίων.

Το έγγραφο υποστήριξης και τα εργαλεία Excel για οικονομικό και χρονικό σχεδιασμό μπορούν να χρησιμοποιηθούν από τα ΚΜΣ ως εργαλεία για συμβουλευτικές δραστηριότητες νέως και υφιστάμενων ενεργειακών κοινοτήτων. Το έγγραφο υποστήριξης και τα εργαλεία Excel δεν θα πρέπει να χρησιμοποιούνται μόνο εντός των έργων, αλλά θα πρέπει επίσης να βοηθούν τους ενδιαφερόμενους και τα έργα έξω από το ECOEMPOWER να αναπτύξουν τα επιχειρηματικά τους μοντέλα, τις οργανωτικές τους μορφές, τους οικονομικούς και τους χρονικούς τους σχεδιασμούς.

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TITLE, DISCLAIMER AND EXECUTIVE SUMMARY (IT)

CLASSIFICAZIONE DELLE FORME ORGANIZZATIVE PER LA FORNITURA
COLLETTIVA E COOPERATIVA DI ENERGIA E I RELATIVI MODELLI DI
BUSINESS TIPICI



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SINTESI

Contesto:

Gli One-Stop-Shop (OSS) e gli organi consultivi nazionali si trovano ad affrontare l'emergere di nuove comunità energetiche con obiettivi diversi che sollevano molte domande senza risposta sia sui modelli di business che sulle forme organizzative. Inoltre, gli stessi istituti di consulenza spesso non possiedono materiali di alta qualità quando si tratta di fare consulenza sui modelli di business e sulle forme organizzative che le comunità energetiche dovrebbero privilegiare. Ci sono ancora poche descrizioni e linee guida chiare su come categorizzare e classificare gli scopi delle comunità energetiche. Ci sono anche poche istruzioni ed esempi sui modelli di business, sulle possibili forme organizzative e sulle loro combinazioni.

Problema:

Le comunità energetiche si trovano in difficoltà a causa della mancanza di linee guida e di attività di consulenza professionali. Alcune comunità falliscono per la mancata comprensione dei fattori elementari di successo, altre hanno buone idee imprenditoriali ma non riescono a vedere il quadro di contesto, perdendo l'occasione di combinare l'idea con altri obiettivi e scopi. Altre ancora si trovano ad affrontare diversi problemi nella scelta dei modelli di business e di forme organizzative solide e sostenibili adatte al loro contesto. Lo sviluppo di piani finanziari e temporali non è considerato un problema, ma è un aspetto necessario per concretizzare i modelli di business e le forme organizzative.

Obiettivo:

Questo deliverable ha lo scopo di porsi come un Documento di Supporto (Capitoli 2-5 di questo deliverable) che descrive i fattori di successo fondamentali, una classificazione degli scopi, dei modelli di business e delle forme organizzative per le comunità energetiche. Questo documento potrà essere utilizzato dagli OSS come strumento nelle loro attività di consulenza. Gli OSS e le loro comunità energetiche pilota hanno valutato la pertinenza del Documento di Supporto e hanno fornito feedback per migliorarlo. Inoltre, questo documento presenta immagini e strutture di strumenti Excel per un "Modello di piano finanziario" e un "Modello temporale". Questi strumenti forniscono assistenza aggiuntiva per le comunità energetiche per sviluppare il loro piano finanziario a 5-10 anni ma non pretendono di offrire nuove conoscenze finanziarie. La pianificazione finanziaria e la pianificazione temporale si basano sul modello aziendale e sulla forma organizzativa sviluppata con il Documento di Supporto.

Documento di Supporto:

Il Documento di Supporto si apre con l'identificazione dei fattori generali di successo per le comunità energetiche. Cerca di identificare gli aspetti fondamentali del successo, che costituiscono la base per tutti i tipi di comunità energetiche. Il documento contiene un elenco completo di 19 fattori di successo fondamentali, come lo scopo/missione comune, il coinvolgimento della comunità, una comunicazione efficace, e una chiara definizione dei vincoli del progetto.

Nel capitolo successivo il Documento di Supporto cerca di chiarire la diversa natura delle comunità energetiche classificando i diversi scopi. Il documento identifica e descrive dieci Categorie di Scopi, come la generazione e il

commercio collettivi, l'autoconsumo collettivo in diverse varianti, l'investimento collettivo e l'aggregazione finanziaria.

Inoltre, il Documento di Supporto mostra versioni di modelli business per ogni Categoria di Scopo utilizzando il formato Business Model Canvas. Il Business Model Canvas presentato per ogni Categoria di Scopo contiene un elenco di elementi che potrebbero essere rilevanti. Questo elenco di elementi può essere visto come una lista di controllo (check list) da considerare quando si sviluppano specifici modelli di business concreti. In aggiunta vengono discusse le possibili combinazioni di modelli di business.

In parallelo, si individuano le forme organizzative (giuridiche) che potrebbero essere adattate alle comunità energetiche. Tutte le possibili forme organizzative/legali sono elencate e discusse, ma il quadro giuridico e l'attuazione dei regolamenti nei singoli Stati membri differiscono notevolmente. Il documento cerca quindi di mantenere un contenuto abbastanza generale da essere valido per ogni Stato membro, che dovrà analizzare in dettaglio la possibilità di attuazione legale delle forme organizzative. Questo capitolo discute anche la conformità o meno di diversi modelli aziendali e forme organizzative.

Applicazione del Documento di Supporto – sviluppo di strategie commerciali

Con gli OSS e i siti pilota sono state discusse diverse strategie commerciali, sono stati selezionati i modelli fattibili per l'implementazione ed è stata valutata la pertinenza del Documento di Supporto con un "Modello di feedback". Il Documento di Supporto ha guidato i siti pilota a riflettere criticamente sulle loro strategie e a identificare e considerare importanti aspetti nascosti del loro modello di business. Le forme organizzative e i modelli di business del Documento di Supporto sono stati migliorati in base ai feedback delle attività pilota e saranno ulteriormente migliorati dai risultati del dialogo multiplo nel prosieguo del progetto.

Piano d'impresa comprensivo di piano finanziario e piano temporale:

Sulla base dei modelli di business e delle forme organizzative che possono essere sviluppate con l'aiuto del Documento di Supporto, il passo successivo per tutte le possibili comunità energetiche è quello di sviluppare piani aziendali a 5 e 10 anni. Questi piani aziendali includono un piano finanziario e un piano temporale. Gli strumenti Excel sviluppati in ECOEMPOWER, ovvero il "Modello del piano finanziario" e il "Modello del piano temporale", sono strumenti semplici per supportare lo sviluppo di questi aspetti. Il piano finanziario comprende un piano dei ricavi, dei costi, degli investimenti, dei finanziamenti, della liquidità (flusso di cassa) e dei profitti e delle perdite. Gli strumenti contengono formule che facilitano il calcolo e la visualizzazione di questi piani. Questi strumenti includono una rapida panoramica, descrizioni ed esempi, ma conservano una loro semplicità e generalità, in quanto la pianificazione finanziaria e la pianificazione temporale sono procedure aziendali standard. Le persone con una formazione aziendale o manageriale standard avranno a disposizione strumenti simili. Questi modelli non creano nuove conoscenze, ma dovrebbero essere considerati come un supporto aggiuntivo.

Gli OSS possono utilizzare questi modelli per chiarire con le comunità energetiche da costituire se esistono già piani finanziari e piani temporali di questa qualità. In caso contrario, le nuove comunità energetiche possono utilizzare gli strumenti per sviluppare il proprio piano finanziario e temporale, ma non devono necessariamente utilizzarli. A seconda della situazione delle nuove comunità energetiche, è chiaro che potrebbe essere più difficile per le comunità energetiche in fase di avvio stimare tutte le cifre richieste. Soprattutto le nuove comunità energetiche avranno bisogno di un po' di tempo per concretizzare la loro pianificazione finanziaria, perché questa viene costruita parallelamente a tutte le altre strutture interne e quindi deve ancora confrontarsi con molti fattori di incertezza.

Inoltre, è stato condotto un workshop per chiarire le questioni ancora aperte e per supportare ulteriormente i siti pilota nell'uso di questi strumenti.

Conclusione:

Il Documento di Supporto sviluppato è stato giudicato dagli OSS e dai siti pilota del progetto uno strumento utile per sviluppare, riflettere criticamente e migliorare i loro modelli di business e le loro forme organizzative. A tutti i siti pilota è stato chiesto di compilare modelli basati sul Documento di Supporto per presentare il proprio caso aziendale. Il Documento di Supporto è stato in grado di ispirare i siti pilota ad ampliare e ristrutturare lo scopo o la combinazione di scopi. I modelli di business in formato canvas hanno fornito un elenco completo di elementi che le nuove comunità energetiche devono considerare per le strategie commerciali. Inoltre, i siti pilota hanno

apprezzato l'elenco dei fattori di successo di base, che evidenzia gli aspetti importanti della creazione di una comunità energetica. L'elenco e la descrizione delle forme organizzative sono stati utili ma limitati nella loro applicazione nazionale, poiché le leggi nazionali e i loro quadri normativi differiscono notevolmente tra gli Stati membri. Il progetto sta lavorando per creare una panoramica dei quadri giuridici per ogni Stato membro. Gli strumenti Excel forniti per la pianificazione finanziaria e temporale sono considerati strumenti utili per concretizzare i piani aziendali a 5 e 10 anni.

Il Documento di Supporto e gli strumenti Excel per la pianificazione finanziaria e temporale possono essere utilizzati dagli One-Stop-Shop come strumenti per le attività di consulenza con le comunità energetiche nuove ed esistenti. Il Documento di Supporto e gli strumenti Excel non dovrebbero essere utilizzati solo all'interno dei progetti, ma anche per aiutare gli attori e i progetti esterni a ECOEMPOWER a sviluppare i loro modelli di business, le forme organizzative, i piani finanziari e temporali.