ECOEMPOWER

ECOsystems EMPOWERing at regional and local scale supporting energy communities

February 2025

D3.4 ONLINE DASHBOARD FOR MONITORING SOCIAL IMPACT

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.

Co-funded by the European Union

TECHNICAL REFERENCES

Project Acronym	ECOEMPOWER
Project Title	ECOsystems EMPOWERing at regional and local scale supporting energy communities
Funding Programme	LIFE 2027
Call	LIFE-2022-CET
Topic	LIFE-2022-CET-ENERCOM
Project Coordinator	Cinzia Morisco (FBK), cmorisco@fbk.eu
Project Start Date	September 1st, 2023
Project End Date	August 31st, 2026
Project Duration	36 months
Project ID	101120775

Deliverable No.	D3.4 - Online dashboard for monitoring social impact
Dissemination Level	PU - Public
Work Package	WP3 – Enabling social participation
Task	T3.4 - Continuous monitoring of social impact
Lead Beneficiary	UNITN
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Contributing Beneficiaries	FBK, PAT, ACV, eza!, PSOE, ROCG
Due Date of Deliverable	30/11/2024
Actual Submission Date	03/03/2025

REVISION AND HISTORY CHART

Version	Date	Editors	Comment
V01	31/01/2025	UNITN	First version of the deliverable
V02	11/02/2025	UNITN	Internal review by WP members
V1	28/02/2025	UNITN	Finalising of deliverable

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EXECUTIVE SUMMARY

The Deliverable 3.4 - “Online dashboard for monitoring social impact”, describes the development of an online dashboard for monitoring the social impact of energy communities within the ECOEMPOWER project, as part of Task 3.4 - “Continuous monitoring of social impact”.

The primary objective of the dashboard is to provide an intuitive tool for collecting, analysing, and visualizing key social data, enabling local actors, municipalities or utilities, and researchers to assess the contribution of energy communities to the ecological transition and social cohesion.

The document outlines the visualisation of data collected in the pilot sites represented in the five regional ecosystems (Italy, France, Germany, Czech Republic, Greece), with a specific focus on indicators related to energy democracy, energy justice, community empowerment, and social awareness. Additionally, it presents an update on social impact indicators, which have been redefined to improve measurability and data representativeness.

Finally, the deliverable analyses the main results obtained and the challenges faced, highlighting how the dashboard can become a tool for monitoring the social impact of energy communities in different regional contexts.

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1 Introduction

1.1 Objectives of the work reported

The objective of Deliverable 3.4 – "Online Dashboard for Monitoring Social Impact" is to present the development and implementation of a digital platform designed to track and analyse the social impact of energy communities within the ECOEMPOWER project. As part of Task 3.4 - Continuous Monitoring of Social Impact, the dashboard provides an integrated tool for data collection, visualisation, and analysis, enabling stakeholders to assess key social dimensions such as energy democracy, energy justice, community empowerment and awareness.

This document is intended for a diverse audience, including policymakers, researchers, energy community members, and project stakeholders. It provides a comprehensive overview of the methodologies used, the structure of the online platform, and the key indicators selected for social impact assessment. Readers are encouraged to refer to previous deliverables, particularly D3.3 – "Collection of Indicators for Assessing Social Impact", to better understand the rationale behind the chosen indicators and their alignment with the project's broader objectives.

1.2 Structure of the document

The document is structured as follows:

- Chapter 2 - Data Collection: Describes the methods and sources used for gathering data across the five regional ecosystems involved in the project (Italy, France, Germany, Czech Republic, and Greece). It highlights the challenges faced and the alternative approaches adopted to ensure data reliability.
- Chapter 3 - Dimensions and Indicators: Explores the possible ways in which the dimensions and indicators can be visualized in the dashboard under development, detailing key aspects such as energy democracy, energy justice, and community engagement.
- Chapter 4 - Online Dashboard: Provides a description of the dashboard's functionalities, the organization of the data and the visualisation tools. The dashboard will be continuously improved and updated with the result of future data collections.
- Chapter 5 - Ongoing Updates to Social Impact Indicators: Discusses the iterative refinement process of the indicators, incorporating feedback from stakeholders and adapting to the evolving needs of the project.
- Chapter 6 - Conclusion: Summarises the key findings, discusses the potential for future developments, and reflects on the role of the dashboard in supporting the long-term sustainability of energy communities.

2 Data collection

The data collection for the analysis of the social impact of energy communities in the ECOEMPOWER project is based on a multidimensional approach. We also prepared a questionnaire to collect data directly from stakeholders involved in the implementation of the energy community in the various territories. Unfortunately, the survey did not achieve the expected success, as the responses received were too few. As a result, we decided to dismiss this kind of data collection and implemented other tools (including tools that were already in use). Therefore, the data used in the analysis comes from several sources, including:

- Interviews with energy community members
- Documentary analysis of local and national policies
- Qualitative and quantitative data collected through data collection template

Each regional ecosystem provides specific insights into governance, inclusivity, and the effectiveness of the participatory tools adopted. However, not all energy communities have been established within the pilot sites, and some data may not be available through the regional ecosystems.

2.1 Regional Ecosystem #1 (RE1): Autonomous Province of Trento (Italy)

The first pilot site is located in **Val di Fassa**, a municipality with 10,090 inhabitants. In 2023, a class from the Ladin School of Fassa participated in the Lego League innovation challenge. As part of this initiative, students designed the development of an energy community. The project involved the Pozza Electric Consortium, which financed the installation of a photovoltaic system on the kindergarten's roof. The goal is to establish an energy community whose proceeds will be entirely used to purchase educational materials for the school. In 2024, it was included in the ECOEMPOWER project as a pilot territory. In September 2024, the CESLA (Comunità Energetica Scuola Ladina e Asilo) energy community was established in the form of an association. At present, the association consists of around ten members including school members and students of legal age who are the creators of the community.

The second pilot site is in **Levico Terme**, a municipality with 8,112 inhabitants in the Valsugana Valley. The initiative involves repurposing a disused school building for the installation of an 80 kW photovoltaic plant, with the involvement of an Energy Service Company (ESCO). One of the main challenges is increasing local stakeholder involvement and managing the risk of overlap with other similar initiatives in the same area.

The third pilot site concerns the **Valle dei Laghi** area, which includes the municipalities of Cavedine, Madruzzo, and Vallelaghi, with a total of approximately 11,000 inhabitants. The project aims to create an energy community with photovoltaic plants with a total capacity of 200 kW, with prospects for development in the biogas sector. Coordination between private and public initiatives and defining the role of local administrations represent the main challenges to be addressed.

2.2 Regional Ecosystem #2 (RE2): Auvergne-Rhône-Alpes and Grand Est (France)

In France, the first pilot site, Centrales Villageoises **Eau et Soleil du Lac**, has been operational since 2022 and extends across the "Grand Lac" area, which has 64,000 inhabitants. The initiative focuses on developing photovoltaic plants, one of which, at 24.6 kWp, is already operational, while two more, at 35.7 kWp and 102

kWp, are in the development phase. Additionally, a 200 kW hydroelectric plant is being planned. The primary goal is to expand citizen participation and integrate local authorities and small businesses into the project.

The second pilot site, Centrales Villageoises **VercorSoleiL**, was founded in 2015 and is currently operational with 29 photovoltaic plants generating an annual output of 510.7 MWh. The community, consisting of 139 citizens, 8 municipalities, and 2 small businesses, aims to exceed 1 MWp of installed capacity, while also developing a 250 kW hydroelectric project and a 2.4 MWp wind project. The main difficulties relate to securing funding and coordinating with local authorities.

The third pilot site, Centrales Villageoises de **Vezouze-en-Piemont**, was established in 2019 in the Grand Est region and comprises a community of 11,947 inhabitants. Currently, there are 10 operational photovoltaic plants with an installed capacity of 410 kWp and an annual output of 446.2 MWh. Future projects include the installation of new photovoltaic plants and the creation of a large 5 MWp solar park. The main challenge is defining strategies for the collective consumption of the energy produced.

2.3 Regional Ecosystem #3 (RE3): Allgau (Germany)

In Germany, the first pilot site concerns **Elektrizitätswerke Hindelang eG**, a historic energy cooperative located in the Allgäu region. The project aims to develop infrastructure for the production and distribution of renewable energy, with strong community involvement. The main difficulties include adapting to new regulations and creating sustainable business models.

The second pilot site is **Elektrizitätswerke Reutte**, a local electricity company with extensive experience in renewable energy. The objective is to increase the share of renewable energy in the local grid through the installation of solar and wind power plants. Balancing energy supply and demand in a decentralised context is the main challenge for the project.

The third pilot site is **Dorfenergie eG**, a local energy cooperative focused on decentralised production and community projects. The primary goal is to expand the community's energy self-sufficiency and promote the use of smart grid technologies. Actively engaging the population and securing the necessary funding for new installations are the main obstacles to overcome.

2.4 Regional Ecosystem #4 (RE4): Zlín Region (Czech Republic)1

The first pilot site in the Czech Republic is **Vlčnov**, a municipality with 2,969 inhabitants. The initiative focuses on installing photovoltaic plants on public buildings. A key element of this project is the public swimming pool, which operates its own 20 kW power plant. Once electricity sharing is officially enabled, the swimming pool will balance the rest of its consumption using energy from other municipal power plants. Other cultural facilities, including the football stadium and cultural centre, will also benefit from shared electricity.

The second pilot site is **Slavičín**, a town with 6,513 inhabitants that has developed a sophisticated community energy system. Approximately two-fifths of households receive heat from local sources. A modern biomass

[1] This partner joined the project at the beginning of the second year, so data collection will take place in the following reference period.

heating plant and solar-powered heat pumps ensure energy production during summer months without the need to burn biomass. Additionally, solar energy is efficiently utilised with the aid of battery storage. Looking ahead, the municipality plans to install a bladeless wind power plant, having been recognised as the "Inspirational Region of the Czech Republic" for its progressive approach.

The third pilot site is **Zlín**, the regional capital with 74,835 inhabitants. Zlín and eight city entities have signed a partnership agreement to establish a community energy association. Initial estimates suggest that this collaboration could result in energy cost savings of 5-10% and the opportunity to sell excess energy profitably. The long-term goal is to expand the community by incorporating additional active entities, enhancing the collective impact of the initiative. A medium-term target includes installing photovoltaic plants with a total output of 2.9 MWp, aligning with the city's broader energy strategy.

2.5 Regional Ecosystem #5 (RE5): Central Greece (Greece)

In Greece, the first pilot site is located in **Domokos**, a municipality with a small but active community interested in energy sustainability. The primary objective is to develop a photovoltaic plant to support local energy needs and provide affordable energy solutions to residents. However, challenges include regulatory barriers and financial constraints in implementing the project.

The second pilot site is in **Kamena Vourla**, a coastal town aiming to integrate renewable energy into its existing infrastructure. The focus is on creating a decentralised energy model by leveraging solar power and battery storage technologies. Key difficulties involve engaging stakeholders and ensuring the feasibility of long-term financial support.

The third pilot site is in **Amfikleia**, a region with a strong agricultural sector. Here, the energy community seeks to combine solar and biomass energy sources to provide local farms with sustainable energy solutions. Coordination between agricultural cooperatives and local authorities remains a crucial aspect of project development.

3 Dimensions and indicators

This section illustrates how the trend of energy communities' implementation can be visualised. It builds upon the results of D3.3 – "Collection of indicators for assessing social impact and guidelines for their measurement", which identified and structured a set of indicators to assess the social impact of energy communities. The data collected in chapter 3.3 of D3.3 serve as the empirical foundation for this visualization. To ensure a more structured and concise representation, the indicators have been reorganized into five main dimensions: Energy Democracy, Energy Justice, Community Empowerment, Community Wellbeing, and Community Awareness. However, since we have not collected enough data to visualise the dimension of Community Wellbeing, we hope to integrate this aspect in future phases of the project.

The pilot sites of the ECOEMPOWER project exhibit different levels of maturity and specific challenges related to the regulatory, economic, and social context. The common goal is to promote energy communities through support mechanisms such as One-Stop Shops and inclusive governance models. Monitoring performance and comparing results with the initial baseline will be essential to assess social impact.

The adopted approach combines quantitative and qualitative metrics to assess the effectiveness of energy communities in different contexts. The indicators focus on:

- Democratic participation and governance models
- Accessibility and inclusivity of energy benefits
- Community empowerment through the adoption of renewable technologies
- Levels of engagement and awareness among community members

The reference timeframe for the data acquisition is from July 2024 to December 2024, after which data will be collected every six months.

3.1 An initial analysis of RE1 (Italy)

3.1.1 Energy Democracy

The dimension of energy democracy evaluates the degree of participation and governance within energy communities. The dashboard displays data classified by indicator, including:

Indicator: Governance model of the energy community

- No. of citizens involved in decision-making processes

Pilot sites	Participation in decision-making (1 person = 1 vote)	Members of the community
Val di Fassa	N/A	10
Levico Terme	N/E	N/E
Valle dei Laghi	40	45

- Governance models adopted (cooperatives, associations, etc.)

Pilot sites	Organisational form of EC
Val di Fassa	Associative
Levico Terme	N/E
Valle dei Laghi	Cooperative

Indicator: Shared ownership of energy

- Renewable energy infrastructure owned by municipalities, citizens and private company

Pilot sites	Renewable energy infrastructure owned by municipalities (n)	Renewable energy infrastructure owned by citizens (n)	Renewable energy infrastructure owned by private companies (n)
Val di Fassa	N/A	N/A	1
Levico Terme	N/E	N/E	N/E
Valle dei Laghi	0	50	50

3.1.2 Energy Justice

Energy justice is measured through indicators that highlight equity and accessibility. The dashboard displays data classified by indicator, including:

Indicator: Inclusiveness and accessibility of information

- Diversity of citizens involved in energy communities based on gender and age

Pilot sites	Men (%)	Women (%)
Val di Fassa	50%	50%
Levico Terme	N/E	N/E
Valle dei Laghi	N/A	N/A

- Diversity of citizens involved in energy communities based on age

Pilot sites	Under 40 (%)	Between 40-49 (%)	Between 50-59 (%)	Over 60 (%)	Tot. (%)
Val di Fassa	60%	20%	20%	0%	100%
Levico Terme	N/E	N/E	N/E	N/E	N/E
Valle dei Laghi	33%	11%	22,22%	33%	100%

- Number of dissemination events

Pilot sites	Number of dissemination events
Val di Fassa	2
Levico Terme	10
Valle dei Laghi	N/A

3.1.3 Community Empowerment

This dimension focuses on the community's ability to manage its own energy resources:

Indicator: Newly added roles

- Number of volunteers

Pilot sites	Volunteers who manage different tasks
Val di Fassa	N/A
Levico Terme	N/E
Valle dei Laghi	10

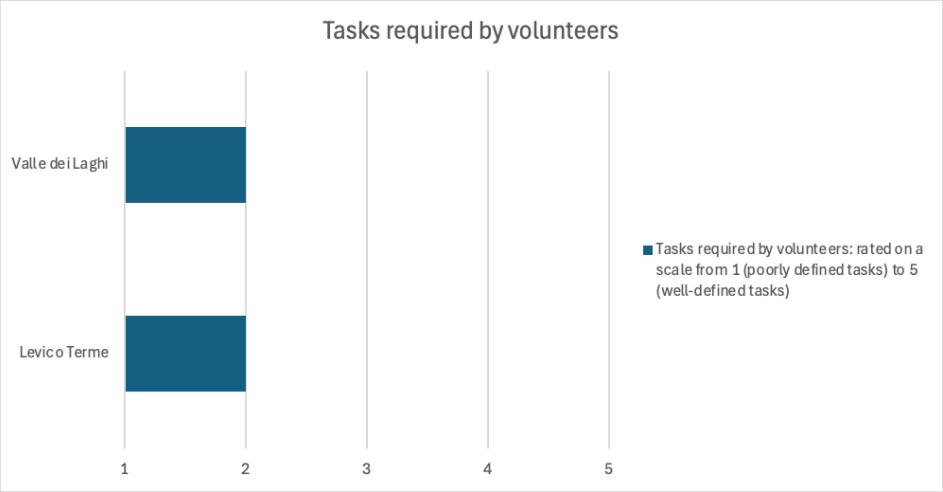
- Number of jobs involved in community management

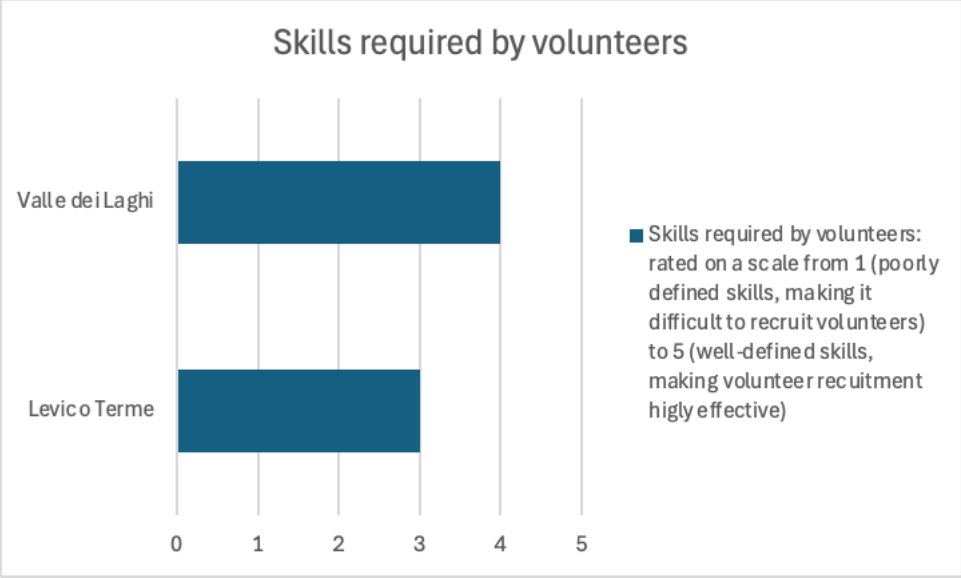
Pilot sites	Number of jobs created
Val di Fassa	N/A
Levico Terme	N/E

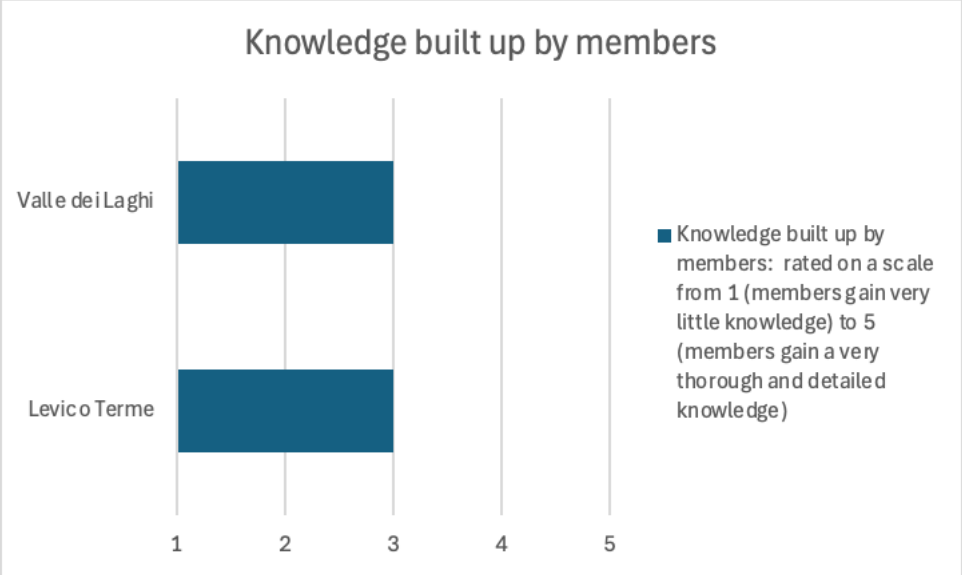
Valle dei Laghi	0

- Professional development opportunities and job creation (Likert scale)

Pilot sites	Tasks required by volunteers	Skills required by volunteers	Knowledge built up by members
Val di Fassa	N/E	N/E	N/E
Levico Terme	2	3	3
Valle dei Laghi	2	4	3







3.1.4 Community Awareness

Community awareness is essential to ensuring the sustainability of energy communities. The dashboard displays data classified by indicator, including:

Indicator: Levels of knowledge

- People who use smart meters to monitor energy consumption in real time

Pilot sites	People who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies
Val di Fassa	N/A
Levico Terme	100%
Valle dei Laghi	100%

3.2 An initial analysis of RE2 (France)

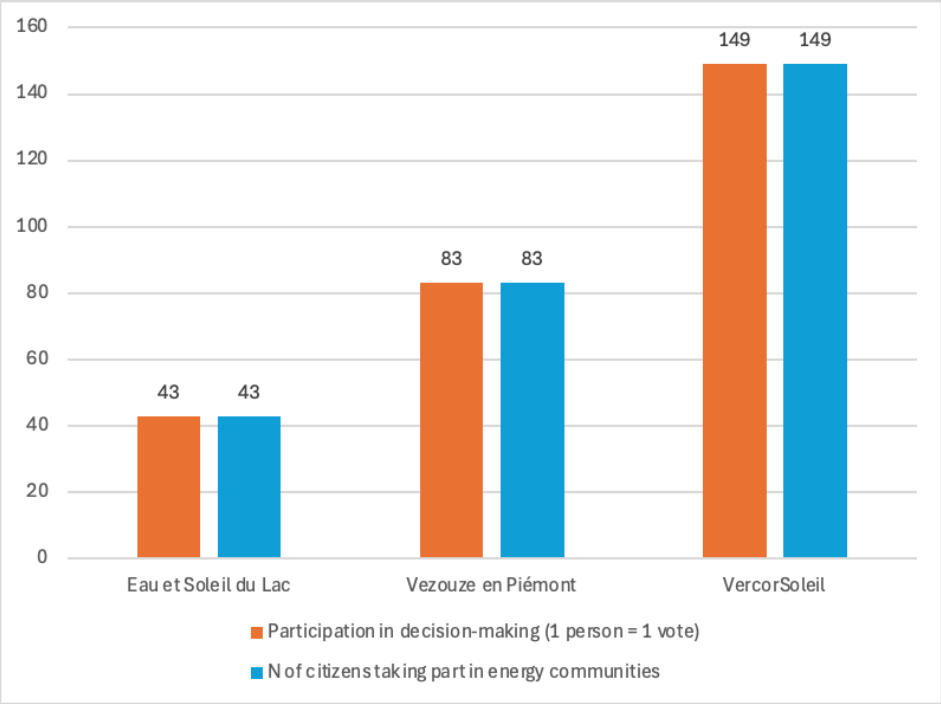
3.2.1 Energy Democracy

The dimension of energy democracy evaluates the degree of participation and governance within energy communities. The dashboard displays data classified by indicator, including:

Indicator: Governance model of the energy community

- No. of citizens involved in decision-making processes

Pilot sites	Participation in decision-making (1 person = 1 vote)	N of citizens taking part in energy communities
Eau et Soleil du Lac	43	43
Vezouze en Piémont	83	83
VercorSoleil	149	149



- Governance models adopted (cooperatives, associations, etc.)

Pilot sites	Organisational form of EC
Eau et Soleil du Lac	Joint stock company
Vezouze en Piémont	Joint stock company
VercorSoleil	Joint stock company

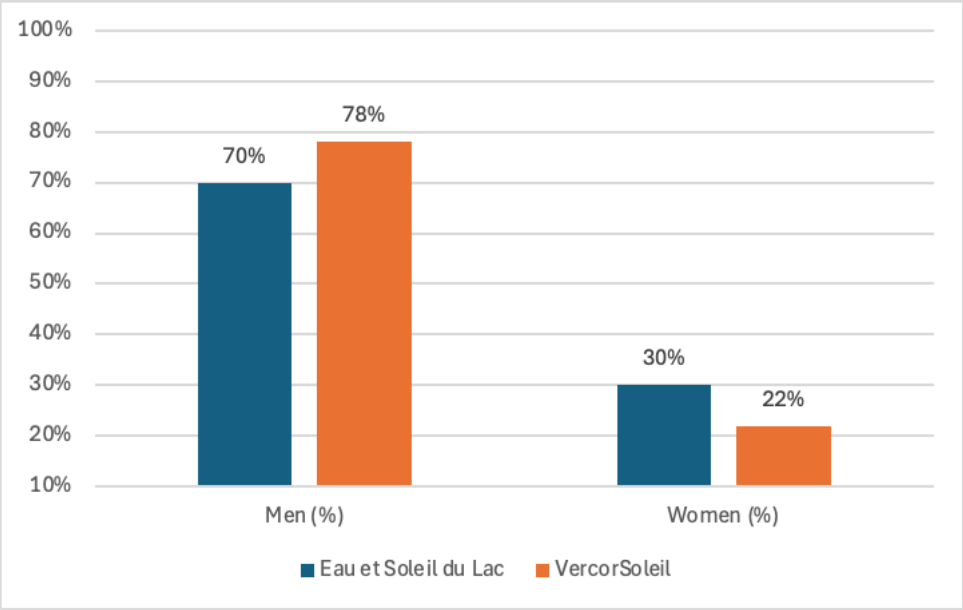
3.2.2 Energy Justice

Energy justice is measured through indicators that highlight equity and accessibility. The dashboard displays data classified by indicator, including:

Indicator: Inclusiveness and accessibility of information

- Diversity of citizens involved in energy communities based on gender and age

Pilot sites	Men (%)	Women (%)
Eau et Soleil du Lac	70%	30%
VercorSoleil	78%	22%
Vezouze en Piémont	N/A	N/A



3.2.3 Community Empowerment

This dimension focuses on the community's ability to manage its own energy resources. The dashboard displays data classified by indicator, including:

Indicator: Newly added roles

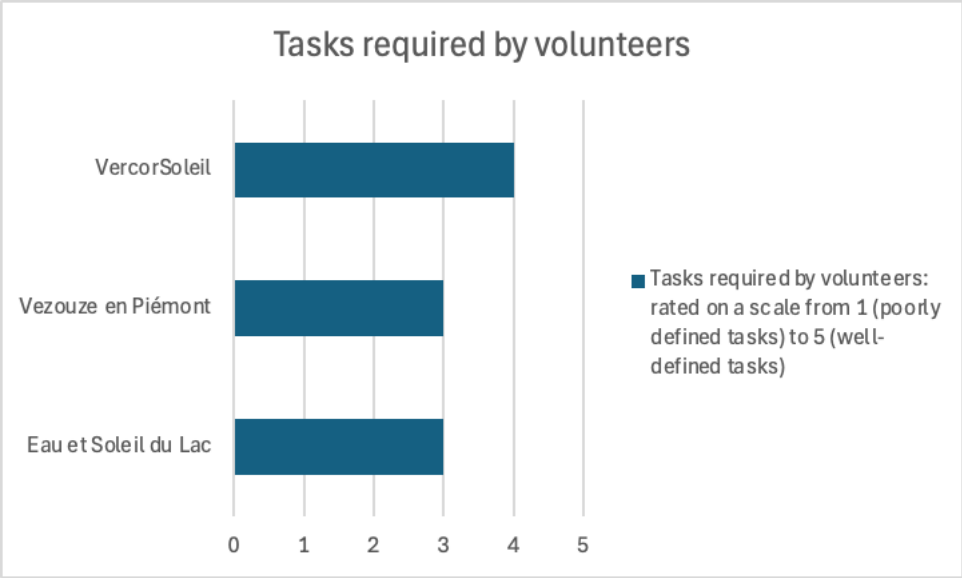
- Number of jobs created

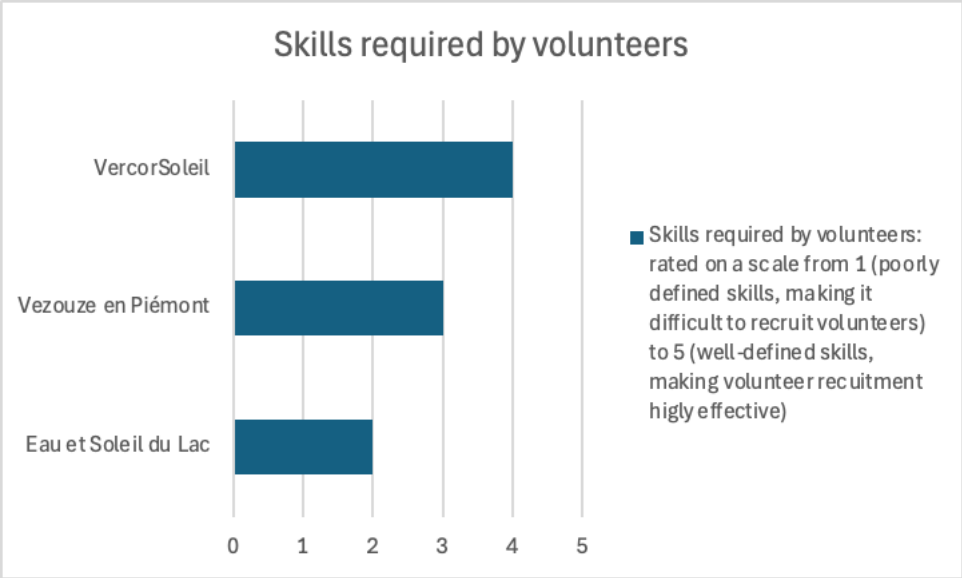
Pilot sites	Job creation (n)
Eau et Soleil du Lac	1.1
Vezouze en Piémont	0

VercorSoleil	0.4

- Professional development opportunities and job creation

Pilot sites	Tasks required by volunteers	Skills required by volunteers	Knowledge built up by members
Eau et Soleil du Lac	3	2	4
Vezouze en Piémont	3	3	5
VercorSoleil	4	4	5



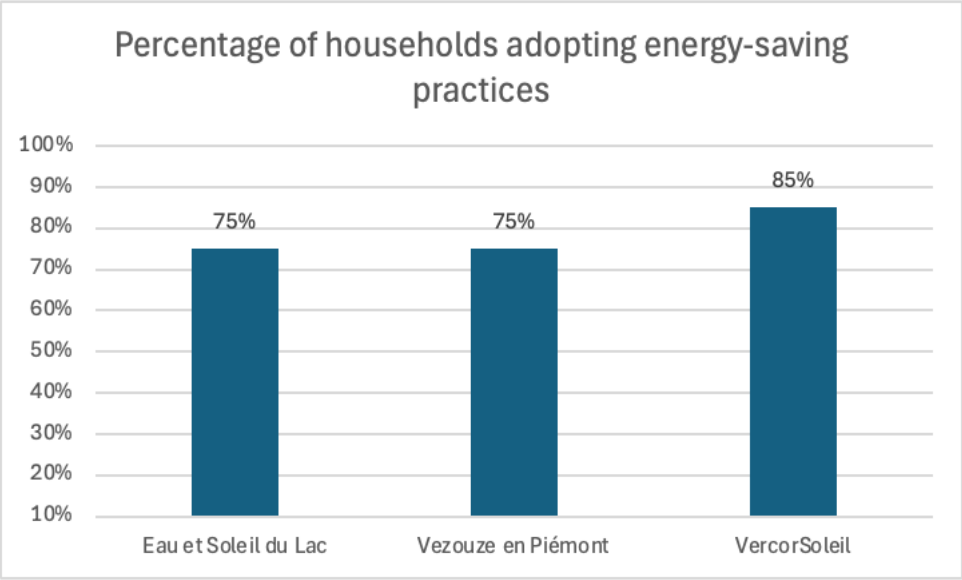


3.2.4 Community Awareness

Community awareness is essential to ensuring the sustainability of energy communities The dashboard displays data classified by indicator, including:

Indicator: Levels of knowledge

- Percentage of households adopting energy-saving practices



3.3 An initial analysis of RE3 (Germany)

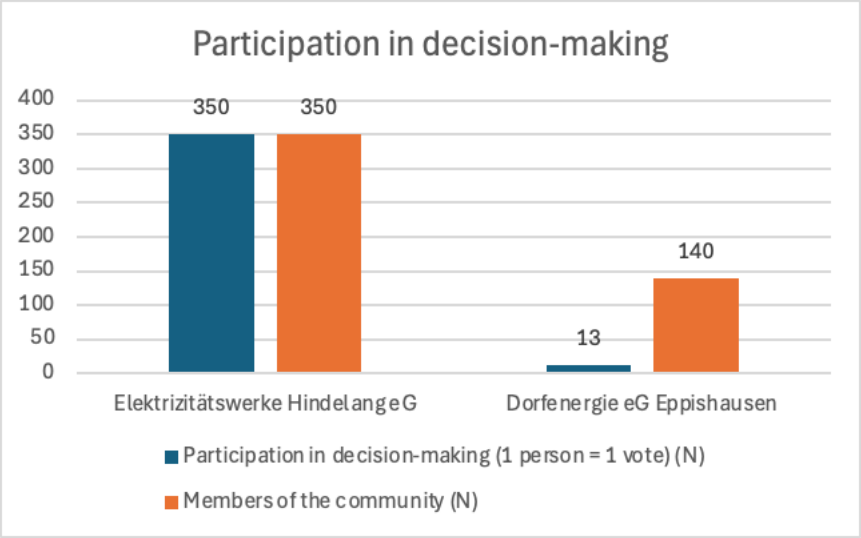
3.3.1 Energy Democracy

The dimension of energy democracy evaluates the degree of participation and governance within energy communities. The dashboard displays data classified by indicator, including:

Indicator: Governance model of the energy community

- No. of citizens involved in decision-making processes

Pilot sites	Participation in decision-making (1 person = 1 vote) (N)	Members of the community (N)
Elektrizitätswerke Hindelang eG	350	350
Dorfenergie eG Eppishausen	13	140
Elektrizitätswerke Reutte	N/E	N/E

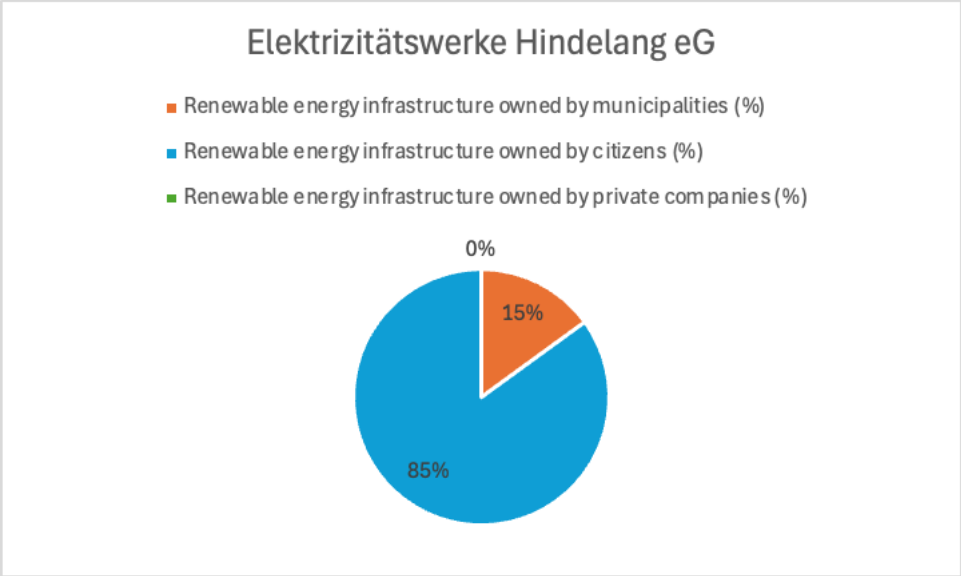


Indicator: *Shared ownership of energy*

- Renewable energy infrastructure owned by municipalities, citizens and private company

Pilot sites	Renewable energy infrastructure owned by municipalities (%)	Renewable energy infrastructure owned by citizens (%)	Renewable energy infrastructure owned by private companies (%)
Elektrizitätswerke Hindelang eG	15%	85%	0%

Dorfenergie eG Eppishausen	0%	99%	0,7%
Elektrizitätswerke Reutte	N/E	N/E	N/E



- Governance models adopted (cooperatives, associations, etc.)

Pilot sites	**Organisational form of EC**
Elektrizitätswerke Hindelang eG	Cooperative
Dorfenergie eG Eppishausen	Cooperative
Elektrizitätswerke Reutte	N/E

- Economic benefits redistributed among members of the energy community (€)

Pilot sites	**Economic benefits redistributed among members of the energy community (€)**
Elektrizitätswerke Hindelang eG	8.750,00 €
Dorfenergie eG Eppishausen	21.375,00 €

Elektrizitätswerke Reutte	N/E

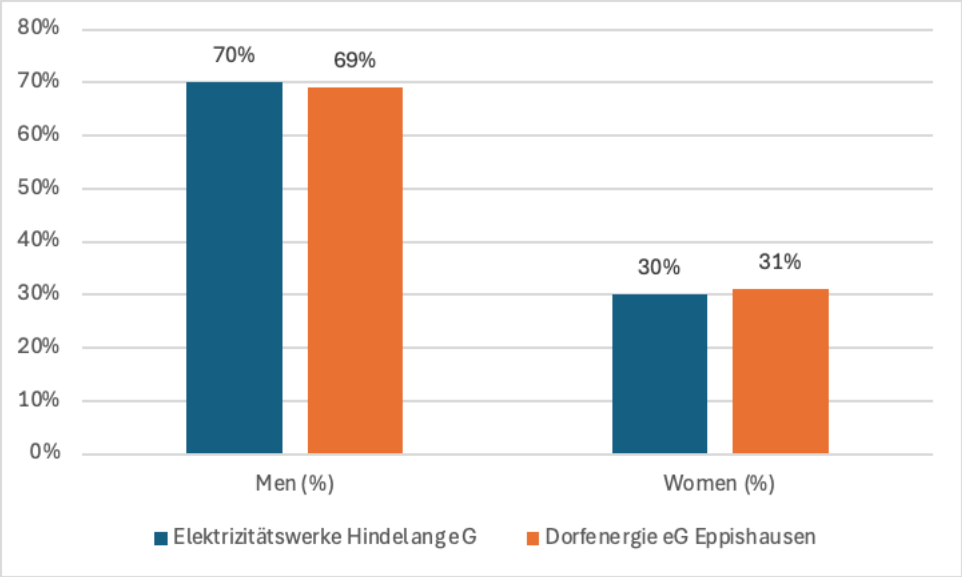
3.3.2 Energy Justice

Energy justice is measured through indicators that highlight equity and accessibility. The dashboard displays data classified by indicator, including:

Indicator: Inclusiveness and accessibility of information

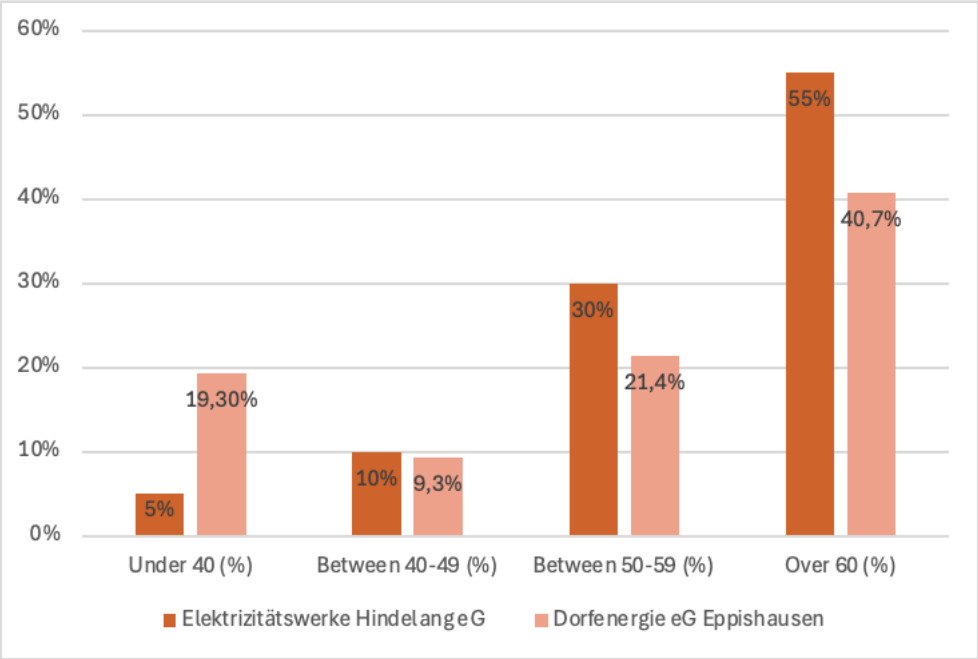
- Diversity of citizens involved in energy communities based on gender and age

Pilot sites	Men (%)	Women (%)
Elektrizitätswerke Hindelang eG	70%	30%
Dorfenergie eG Eppishausen	69%	31%
Elektrizitätswerke Reutte	N/E	N/E



Pilot sites	Under 40 (%)	Between 40-49 (%)	Between 50-59 (%)	Over 60 (%)	N/A	Tot. (%)
Elektrizitätswerke Hindelang eG	5%	10%	30%	55%	0%	100%
Dorfenergie eG Eppishausen	19,30%	9,3%	21,4%	40,7%	9,3%	100%

Elektrizitätswerke Reutte	N/E	N/E	N/E	N/E	N/E	N/E



- Percentage of household income spent on energy

Pilot sites	Income spent on energy (%)
Elektrizitätswerke Hindelang eG	6,2%
Dorfenergie eG Eppishausen	6,2%
Elektrizitätswerke Reutte	N/E

- Number of dissemination events

Pilot sites	Number of dissemination events
Elektrizitätswerke Hindelang eG	10
Dorfenergie eG Eppishausen	1
Elektrizitätswerke Reutte	N/E

3.3.3 Community Empowerment

This dimension focuses on the community's ability to manage its own energy resources. The dashboard displays data classified by indicator, including:

Indicator: Newly added roles

- Number of jobs created

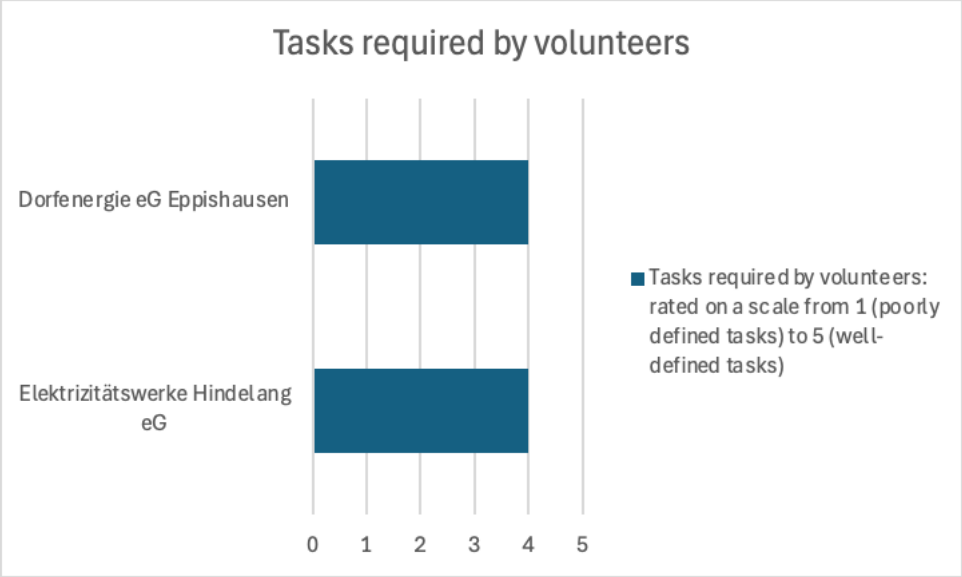
Pilot sites	Number of jobs created
Elektrizitätswerke Hindelang eG	16
Dorfenergie eG Eppishausen	0
Elektrizitätswerke Reutte	N/E

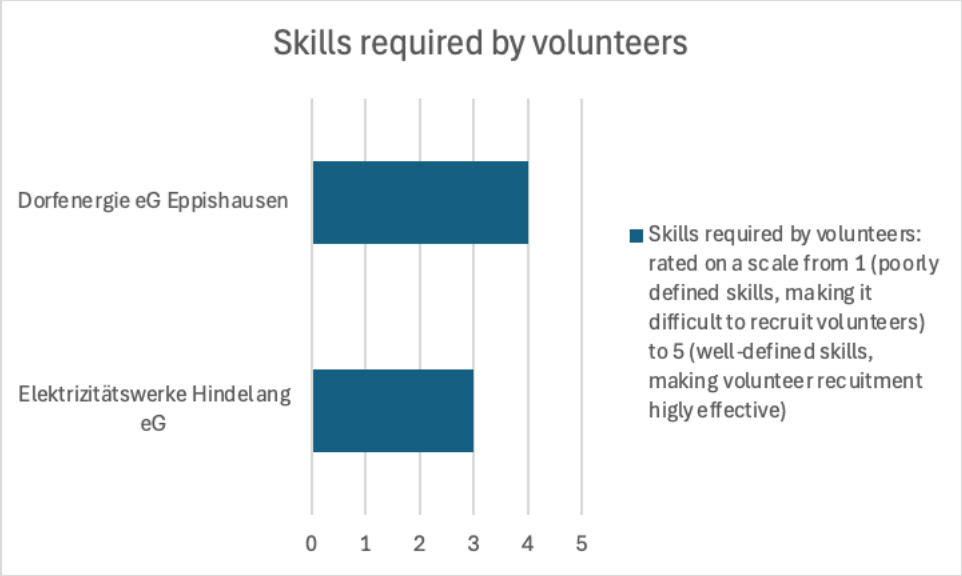
- Number of volunteers involved in community management

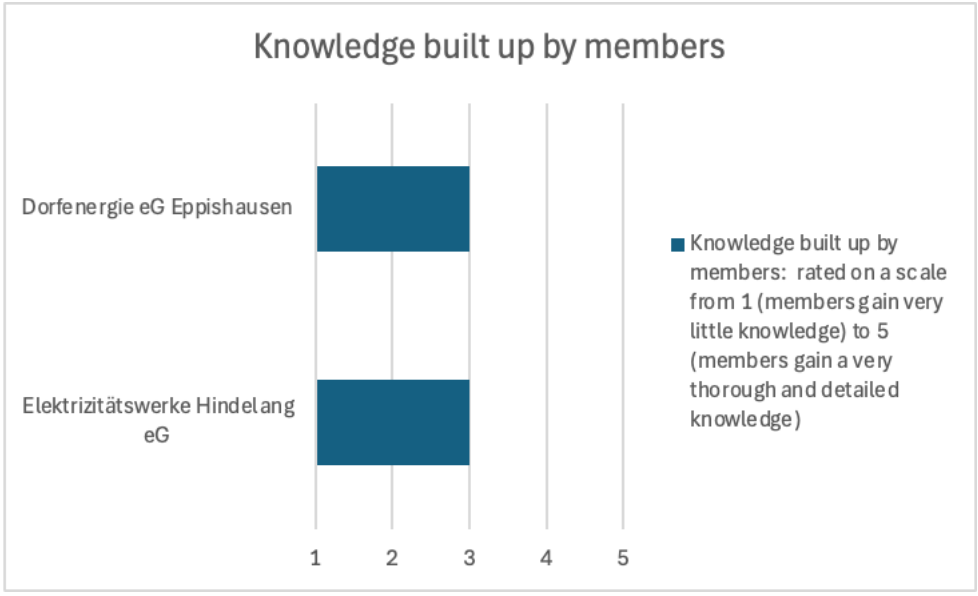
Pilot sites	Volunteers who manage different tasks
Elektrizitätswerke Hindelang eG	3
Dorfenergie eG Eppishausen	13
Elektrizitätswerke Reutte	N/E

- Professional development opportunities and job creation (Likert scale)

Pilot sites	Tasks required by volunteers	Skills required by volunteers	Knowledge built up by members
Elektrizitätswerke Hindelang eG	4	3	3
Dorfenergie eG Eppishausen	4	4	3
Elektrizitätswerke Reutte	N/E	N/E	N/E


Tasks required by volunteers
Dorfenergie eG Eppishausen
Elektrizitätswerke Hindelang eG
0 1 2 3 4 5
Tasks required by volunteers: rated on a scale from 1 (poorly defined tasks) to 5 (well-defined tasks)


Skills required by volunteers
Dorfenergie eG Eppishausen
Elektrizitätswerke Hindelang eG
0 1 2 3 4 5
Skills required by volunteers: rated on a scale from 1 (poorly defined skills, making it difficult to recruit volunteers) to 5 (well-defined skills, making volunteer recuitment higly effective)

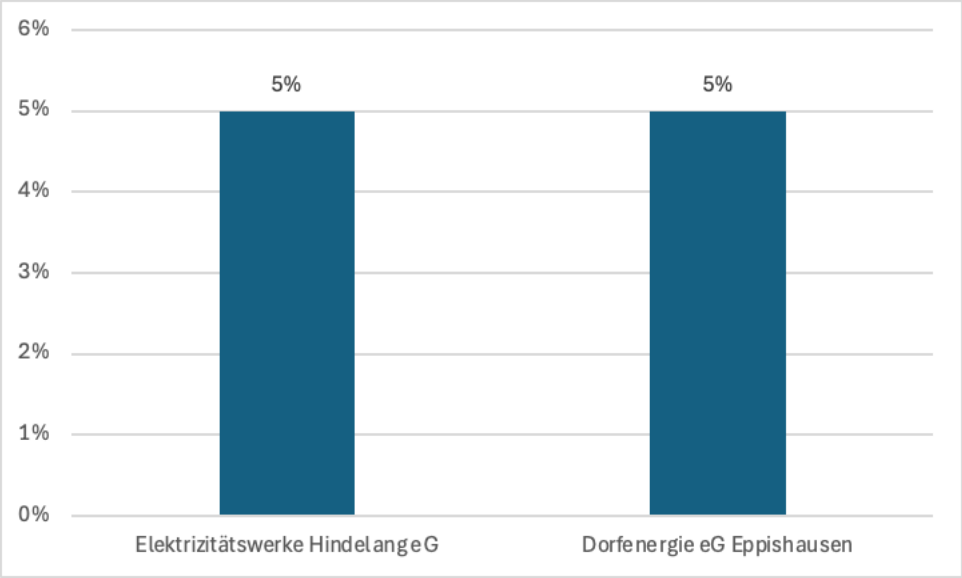

Knowledge built up by members
Dorfenergie eG Eppishausen
Elektrizitätswerke Hindelang eG
1 2 3 4 5
Knowledge built up by members: rated on a scale from 1 (members gain very little knowledge) to 5 (members gain a very thorough and detailed knowledge)

3.3.4 Community Awareness

Community awareness is essential to ensuring the sustainability of energy communities. The dashboard displays data classified by indicator, including:

Indicator: Levels of knowledge

- People who use smart meters to monitor energy consumption in real time



3.4 An initial analysis of RE5 (Greece)

3.4.1 Energy Democracy

The dimension of energy democracy evaluates the degree of participation and governance within energy communities. The dashboard displays data classified by indicator, including:

Indicator: Governance model of the energy community

- No. of citizens involved in decision-making processes

Pilot sites	Participation in decision-making (1 person = 1 vote)	Members of the community
Domokos	N/E	N/E
Kamena Vourla	N/E	N/E
Amfikleia	N/E	N/E

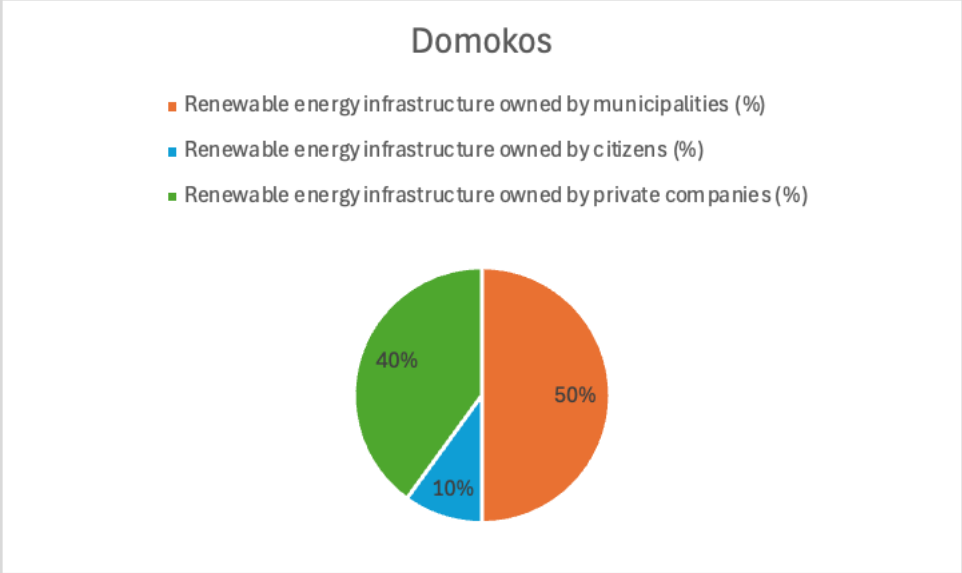
- Governance models adopted (cooperatives, associations, etc.)

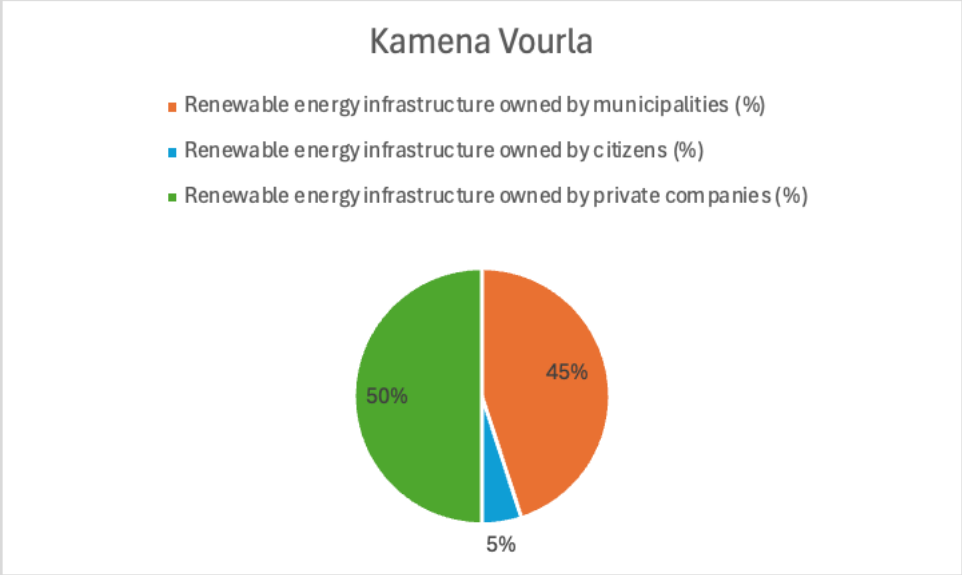
Pilot sites	Organisational form of EC
Domokos	N/E
Kamena Vourla	N/E
Amfikleia	N/E

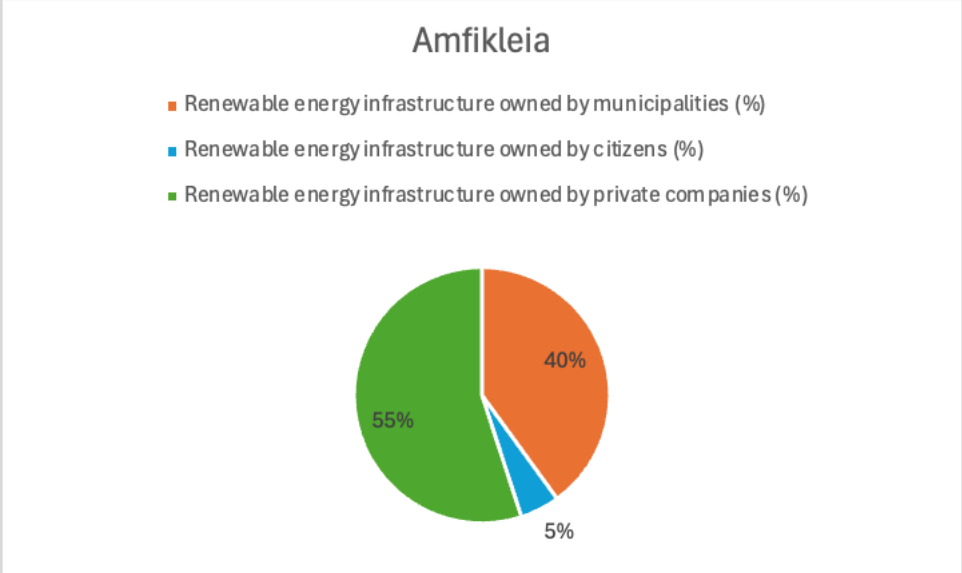
Indicator: *Shared ownership of energy*

- Renewable energy infrastructure owned by municipalities, citizens and private company

Pilot sites	Renewable energy infrastructure owned by municipalities (%)	Renewable energy infrastructure owned by citizens (%)	Renewable energy infrastructure owned by private companies (%)
Domokos	50%	10%	40%
Kamena Vourla	45%	5%	50%
Amfikleia	40%	5%	55%







3.4.2 Energy Justice

Energy justice is measured through indicators that highlight equity and accessibility. The dashboard displays data classified by indicator, including:

Indicator: Inclusiveness and accessibility of information

- Percentage of household income spent on energy

Pilot sites	Income spent on energy (%)
Domokos	10,0%
Kamena Vourla	10,0%

Amfikleia	12%

- Diversity of citizens involved in energy communities based on gender and age: no data available
- Number of dissemination events

Pilot sites	Number of dissemination events
Elektrizitätswerke Hindelang eG	5
Dorfenergie eG Eppishausen	3
Elektrizitätswerke Reutte	4

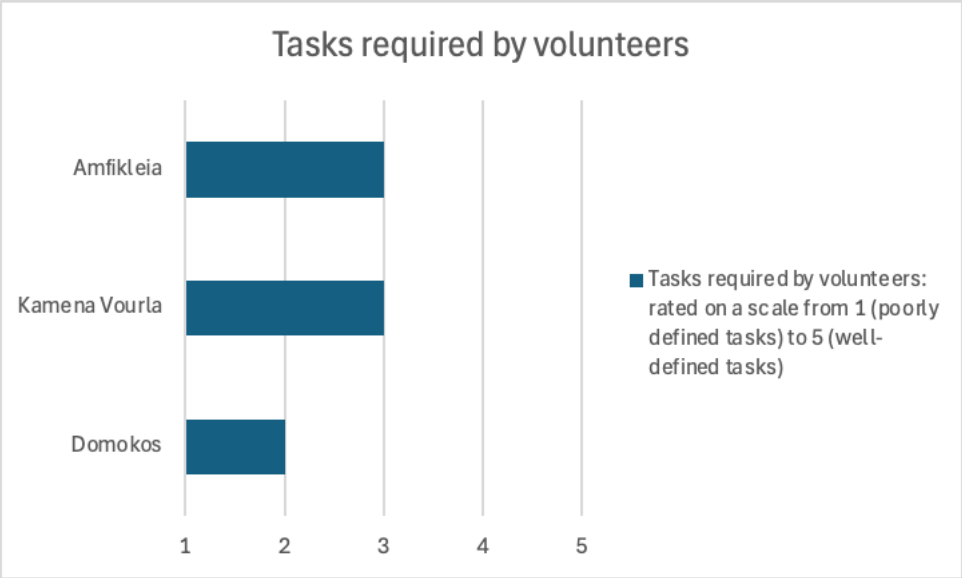
3.4.3 Community Awareness

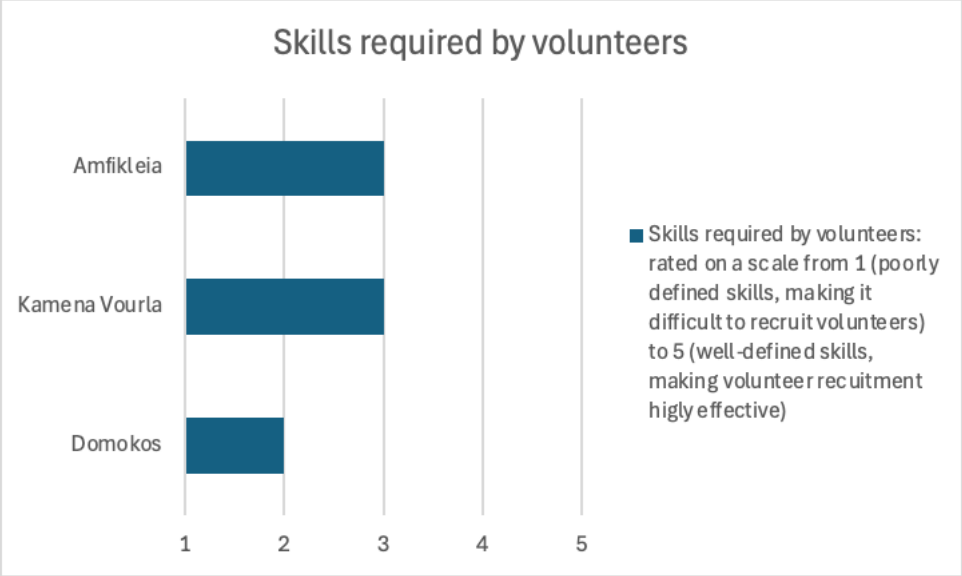
This dimension focuses on the community's ability to manage its own energy resources. The dashboard displays data classified by indicator, including:

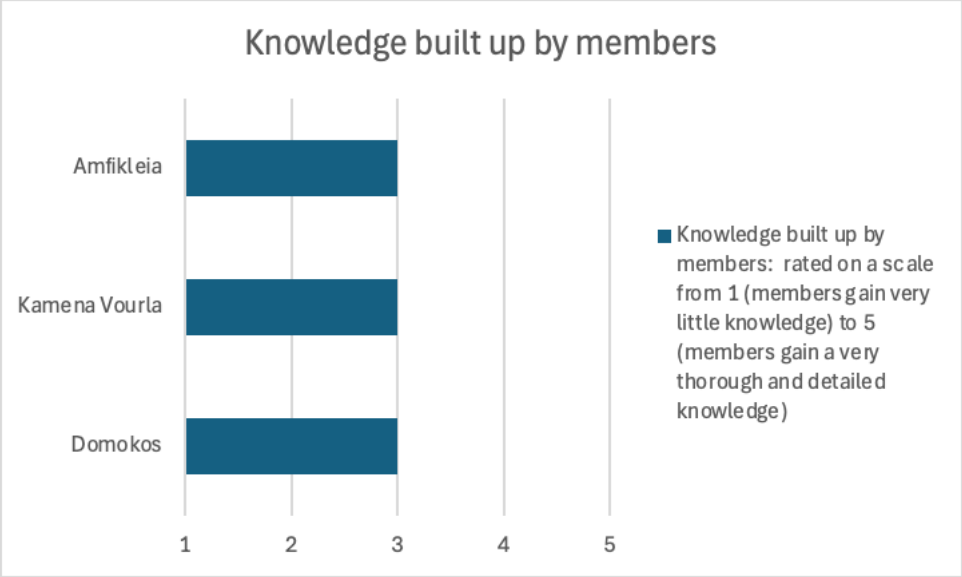
Indicator: Newly added roles

- Number of jobs created: no jobs created
- Number of volunteers involved in community management: no volunteers yet on the territory
- Task and skills required and build up to develop the EC (Likert scale)

Pilot sites	Tasks required by volunteers	Skills required by volunteers	Knowledge built up by members
Domokos	2	2	3
Kamena Vourla	3	3	3
Amfikleia	3	3	3


Tasks required by volunteers
Amfikleia
Kamena Vourla
Domokos
1
2
3
4
5
Tasks required by volunteers: rated on a scale from 1 (poorly defined tasks) to 5 (well-defined tasks)


Skills required by volunteers
Amfikleia
Kamena Vourla
Domokos
1
2
3
4
5
Skills required by volunteers: rated on a scale from 1 (poorly defined skills, making it difficult to recruit volunteers) to 5 (well-defined skills, making volunteer recuitment higly effective)



3.4.4 Community Awareness

Community awareness is essential to ensuring the sustainability of energy communities. The dashboard displays data classified by indicator, including:

Indicator: Levels of knowledge

- Percentage of households adopting energy-saving practices

Pilot sites	Percentage of households adopting energy-saving practices
Domokos	45%
Kamena Vourla	35%
Amfikleia	34%

4 Online dashboard

A dashboard is an online tool for presenting data. It provides an intuitive way to navigate data, by means of tables and graphs. The main advantages of dashboards are the possibility to tailor data presentation to specific contexts, the automated integration with data sources, and the ease of use with respect to raw data navigation. In general, dashboards are the final result of a digitally based data analysis process.

In our case, the main goal of the dashboard is to offer an integrated view of data related to social impact, collected in the pilot sites by Regional Ecosystem Partners. The visualization is structured according to the dimensions and indicators presented in previous sections of this document and in Deliverable 3.3: Energy Democracy, Energy Justice, Community Empowerment, Community Awareness.

The expected users of the dashboard are all stakeholders interested in Energy Communities (EC), including local authorities, municipalities, utilities and other companies, and researchers. EC members and managers may use it to analyse their own data or to identify contexts similar to their own, to create possible connections and collaborations. In addition, the tool could also be useful for emerging EC, in order to compare with existing ones and refine their plans.

The dashboard is freely accessible in the project web site (https://ecoempower.eu/) in the area dedicated to the Community, within the Tools section.

The first page of the dashboard shows a global view of the data collected across all pilot sites. Filters are available to restrict the analysis to only some pilot sites, for instance the ones in a specific country or the ones where there is an already established EC or selecting a particular pilot site. The selection of a specific country can also be done via an interactive map. From the main page, it is then possible to navigate to four sections corresponding to the above mentioned key dimensions (Energy Democracy, Energy Justice, Community Empowerment, Community Awareness).

Currently, the dashboard displays the results of the first data collection cycle, which is the only available dataset at this time. In the next phases of the project, the dashboard will be updated with future next data collections. Most of the tables will then be revised to visualize variations over time. Once multiple data points will be available, graphs will be also introduced to better visualize time trends.

To indicate missing data, the following labels are used: N/E and N/A. The first one stands for Not Existing and indicates that in a particular pilot site there is currently no EC, making it impossible to collect that particular data. The second one stands for Not Available and indicates data that could not be gathered due to limitations in data collection, regardless of the existence of an EC.

As shown also in the tables included in this deliverable, many pilot sites are missing data for several indicators. In most cases a complete data collection is not yet feasible. For that reason, as well as for better integration with WP6, the tools used for data collection are currently under revision. The social indicators are also under revision to improve measurability and data representativeness. See the next section for a description of the first revision.

The dashboard has been implemented using Looker Studio, a tool fully integrated with Google Drive. The tool was selected due to its seamless integration with Google's ecosystem and simplicity of the online publication process.

As new data will be collected and indicators will be refined, the dashboard will continue evolving to provide more accurate and representative insights.

5 Ongoing updates to social impact indicators

The process of updating indicators will be continuous until the end of the project and will be based on:

- Feedback from project partners
- Feasibility of data collection in different contexts
- Evaluation of each indicator's effectiveness in measuring real social impact

In addition, we designed a questionnaire to collect data from public and private stakeholders involved in the implementation of the energy community, which did not yield the desired results. For this reason, we had to rethink the data collection tools and reconsider some indicators to simplify the collection of data by asking for direct input from the regional ecosystems. The adaptation of indicators will take place in different phases, integrating:

- New data collection methodologies
- Direct experiences from energy communities
- Collaboration with stakeholders and policymakers

Project partners will provide essential input to adapt and improve the indicators, ensuring their relevance and applicability in different contexts.

5.1 Review and reformulation of indicators

To improve the current indicators, we first revised the overall framework by introducing a general information section. Additionally, we decided to merge the document with WP6 to streamline data collection and simplify the process.

This first section is descriptive and provides a detailed description of the pilot site, including the number of projects, available incentives, number of installations, size, cost and power, and the number of people involved. Some indicators previously categorized under democracy were reassigned to energy justice dimension to ensure better alignment. For instance, in France, most energy communities are legally structured as joint-stock company, yet their governance often follows a "*one person, one vote*" model, unlike other juridical models that may use voting colleges. To reflect this distinction, we categorized juridical form under general project information, while governance mode remains an indicator of democracy. The well-being dimension has been integrated into the others to ensure a more cohesive and comprehensive analysis.

5.1.1 Democracy dimension

As highlighted in the literature for this dimension, our focus remains on the governance model, though we refined its formulation. There was confusion regarding questions on social capital distribution, so we clarified them for better accuracy. Additionally, we reassigned certain energy justice indicators to energy democracy, as they more effectively capture the procedural aspects of deliberative democracy while energy justice is generally analyzed through the lens of recognition, addressing specific population groups as a transversal dimension (Eames and Hunt, 2013; Fiander et al., 2024; Jenkins, 2018).

We also refined distinctions between different moments of participation, recognizing that engagement varies depending on the event type and project size, as shown in collective action research (Dudka et al., 2023). To better capture this, we now separate:

- **Formal participatory work:** The number of formal meetings organized by the community.
- **Informal participatory work:** Various engagement forms beyond official meetings.
- **Key annual moments:** When even less-involved shareholders tend to participate actively, as supported by empirical data.

5.1.2 Energy justice dimension

To better assess whether specific measures were or are planned to target underrepresented groups in energy communities—such as low-income individuals, women, and young people—we revised several formulations (Dudka, 2023). Based on feedback from our partners, we also emphasized recognition by explicitly asking whether targeted policies have been developed and reformulate the initial demand on methods used to reach vulnerable population.

A key improvement, as suggested by our partners and already emphasized in the literature (Hanke et al., 2021), is distinguishing between:

- Projects that do not intend to address energy justice issues.
- Projects that lack the resources to implement energy justice measures.

This distinction provides a more nuanced understanding of project motivations and constraints in addressing energy justice.

Additionally, we retained the representativity indicator but introduced new questions for projects still in development (i.e., those not yet fully constituted). Finally, we added a question on the redistribution of benefits, distinguishing whether profits serve private interests only, mutual interests among members or broader general interest objectives (Dudka et al., 2024).

5.1.3 Empowerment dimension

To strengthen the empowerment dimension, we integrated here the indicator on the number of awareness-related workshops.

The second empowerment indicator evaluates the transformational impact of participating in an energy community. To improve clarity, we added the phrase "*since participating in an energy community*" to explicitly assess the correlation between participation and empowerment.

We also incorporated key issues from the literature, such as flexibility and go deeper on smart meters (Barnes et al., 2022). Given that empowerment is also connected to territorial dynamics, we incorporated a relational approach to examine how communication, social capital, and local networks contribute to broader territorial empowerment (Coy et al., 2021).

5.1.4 Project motivations

Lastly, we introduced a section on project motivation to better understand why these initiatives are emerging. This addition allows us to evaluate not only the initial intentions behind the projects but also their willingness to

pursue social impacts. By analyzing these motivations, we aim to determine whether projects are explicitly designed with social objectives in mind or if social benefits emerge as secondary effects—an issue raised through our fieldwork experience with partners (Bauwens, 2016).

5.1.5 Measuring

This reformulation of indicators has also been designed with the dashboard's functionality in mind, aiming to improve the understanding and visualization of the data. By allowing for the scoring of indicators across different dimensions—democracy, justice, and empowerment—we enable a more synthetic representation of the results. This approach would facilitate comparisons and mapping, making it easier to identify trends and assess the social impact of energy communities at a glance.

In parallel, the measure has been standardized as a percentage to enhance clarity and provide a more meaningful interpretation of the results.

6 Conclusion

The implementation of the online dashboard represents a significant step forward in measuring the social impact of energy communities. Despite challenges related to data collection and the definition of standardised indicators, the approach adopted has made it possible to develop a flexible and adaptable system suited to different local contexts. Continuous monitoring and active community engagement remain key elements in ensuring the tool's effectiveness and scalability.

In the future, integrating the dashboard with additional analytical tools and fostering collaboration with institutional and local stakeholders could further strengthen the project's impact, promoting an increasingly participatory and equitable energy governance.

List of Abbreviations

N/E	Not established EC
N/A	Data not available
EC	Energy community

A. Data Collection Template – RE1 Italy

Data collection 1st Pilot site – RE1.1 Val di Fassa

- Has the energy community been established?

✓ Not

Table 1.1.1 – Input request for evaluation Energy democracy – RE1.1 Val di Fassa

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	1	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructure owned by municipalities.	0	%
Renewable energy infrastructure owned by citizens.	0	%
Renewable energy infrastructure owned by private companies.	1	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	10	[#]
Representative board election system	all members are founders	Description of voting system used
Organisational form of EC	Associative (next to be instituted)	• Associative • Cooperative • Other (Specify ___)

Table 1.1.2 – Input request for evaluation Energy justice - RE1.1 –Val di Fassa

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	Not available data	[%]
Number of citizens taking part in energy communities	10	[#]

Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) ***Dissemination activities*** *aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	2	[#]
Number of workshops (collective working group on energy communities	1	[#]
Number of people participating workshops	20	
Number of promotional activities (leaflet distribution, etc.) ***Promotional activities*** *refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	0	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	1	[#]
Number of stakeholders reached through events and media	1	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	1	[#]
Availability and accessibility of information on energy projects	3	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	Not available data	%
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Men involved in the EC (WP6)	50	%
Women involved in the EC (WP6)	50	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	 30 10 10 10 20 20	%

Table 1.1.3 – Input request for evaluation Community empowerment – RE1.1 –Val di Fassa

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	0	[#]

Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	0	[#]
Indicator: New added roles		
Number of energy projects and local initiatives (except EC) Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).	0	[#]
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	10	[#]
Number of jobs created (WP6)	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	0	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	0	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	0	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	0	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	0	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good

Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.1.4 – Input request for evaluation Community wellbeing - RE1.1 – Val di Fassa

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Adoption of sustainable energy practices with the emergence of Energy Communities (such us turn on electrical household appliances at the time of maximum energy production; use electric means of transport; etc.).		[] Very [] Enough [] Little [] Not at all [] Don't know
Practices implemented to reduce energy consumption daily consumption.	Not available data	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Supporting installation of RES	[] Installation of solar panels or other renewable sources.

		[] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	In the local school there is attention in climate change	[] Yes. If yes, describe the vision and goals [] No.

Table 1.1.5 – Input request for evaluation Community awareness - RE1.1 – Val di Fassa

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	Not available data	%
Percentage of people who consider energy sustainability a priority for the community	Not available data	%
Percentage of households adopting energy-saving practices	Not available data	%
Level of people's satisfaction with the community's efforts towards energy sustainability	Not available data	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	10	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	1	[#]
Number of schools involved in energy awareness initiatives.	3	[#]

Data collection 2nd Pilot site – RE1.2 Levico Terme

- Has the energy community already been established?

✓ Not

Table 1.2.1 – Input request for evaluation Energy democracy [RE1.2 – Levico Terme]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructure owned by municipalities.	0	%
Renewable energy infrastructure owned by citizens.	0	%
Renewable energy infrastructure owned by private companies.	0	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	0	[#]
Representative board election system	not yet known	Description of voting system used
Organisational form of EC	not yet known	• Associative • Cooperative • Other (Specify ___)

Table 1.2.2 – Input request for evaluation Energy justice [RE1.2 – Levico Terme]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	not yet known	[%]
Number of citizens taking part in energy communities	not yet known	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) ***Dissemination activities** aim to create awareness by providing broader information about energy communities,*	0	[#]

their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.		
Number of workshops (collective working group on energy communities	0	[#]
Number of people participating workshops	0	
Number of promotional activities (leaflet distribution, etc.) ***Promotional activities*** *refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	0	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	0	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	0	[#]
Availability and accessibility of information on energy projects	0	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	0	%
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Men involved in the EC (WP6)	0	%
Women involved in the EC (WP6)	0	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	Group not yet formed	%

Table 1.2.3 – Input request for evaluation Community empowerment [RE1.2 – Levico Terme]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	2	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	150	[#]

Number of energy projects and local initiatives (except EC) Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).	1	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	nyk	[#]
Number of jobs created	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	3	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
2. Tasks required by volunteers **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
3. Skills required by volunteers **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
4. Knowledge built up by members **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	Likert scale
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	Likert scale
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.2.4 – Input request for evaluation Community wellbeing [RE1.2 – Levico Terme]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Adoption of sustainable energy practices with the emergence of ECs		[] Very [] Enough [] Little [] Not at all [] Don't know
Practices implemented to reduce energy consumption daily consumption.	sensibilization to energy savings methods	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels or other renewable sources. Educational campaigns on energy saving.	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives.

		[] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	no	[] Yes. If yes, describe the vision and goals [] No.

Table 1.2.5 – Input request for evaluation Community awareness [RE1.2 – Levico Terme]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	100	%
Percentage of people who consider energy sustainability a priority for the community	70	%
Percentage of households adopting energy-saving practices	40	%
Level of people's satisfaction with the community's efforts towards energy sustainability	4	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	nyk	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	2	[#]
Number of schools involved in energy awareness initiatives.	1	[#]

Data collection 3rd Pilot site – RE 1.3 Valle dei Laghi

- Has the energy community already been established?

✓ Yes as legal entity 21/6/2023

Table 1.3.1 – Input request for evaluation Energy democracy [RE1.3 –Valle dei Laghi]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	1	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructure owned by municipalities.	0	%
Renewable energy infrastructure owned by citizens.	50	%
Renewable energy infrastructure owned by private companies.	50	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	40	[#]
Representative board election system	Every member has a vote	Description of voting system used
Organisational form of EC	cooperative	• Associative • Cooperative • Other (Specify ___)

Table 1.3.2 – Input request for evaluation Energy justice [RE1.3 –Valle dei Laghi]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	nd	[%]
Number of citizens taking part in energy communities	40	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities,*	10	[#]

their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.		
Number of workshops (collective working group on energy communities	0	[#]
Number of people participating workshops	0	
Number of promotional activities (leaflet distribution, etc.) ***Promotional activities*** *refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	10	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	0	[#]
Number of stakeholders reached through events and media	100	[#]
Availability and accessibility of information on energy projects	3	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	0	%
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Men involved in the EC (WP6)		%
Women involved in the EC (WP6)		%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	 1 4 5 5 5 10 15	%

Table 1.3.3 – Input request for evaluation Community empowerment [RE1.3 –Valle dei Laghi]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	2	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	40	[#]
Number of energy projects and local initiatives (except EC) Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).	0	[#]
Indicator: New added roles		

Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	10	[#]
Number of jobs created (WP6)	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	3	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor

The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.3.4 – Input request for evaluation Community wellbeing [RE1.3 –Valle dei Laghi]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Adoption of sustainable energy practices with the emergence of ECs		[] Very [] Enough [] Little [] Not at all [] Don't know
Practices implemented to reduce energy consumption daily consumption.	nyd	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels or other renewable sources. Creation of local energy cooperatives. Educational campaigns on energy saving. Promotion of energy	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other

	consumption practices.	
Presence of social movements on climate change in the local community	no	[] Yes. If yes, describe the vision and goals [] No.

Table 1.3.5 – Input request for evaluation Community awareness [RE1.3 –Valle dei Laghi]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	100	%
Percentage of people who consider energy sustainability a priority for the community	70	%
Percentage of households adopting energy-saving practices	60	%
Level of people's satisfaction with the community's efforts towards energy sustainability	3	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	nd	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	nk	[#]
Number of schools involved in energy awareness initiatives.	nk	[#]

B. Data Collection Template – RE2 France

Data collection 1st Pilot site – 2.1 Eau et Soleil du Lac

The reference timeframe is from July 2023 to December 2024. After which data will be collected every 6 months.

- Has the energy community already been established?
  - ✓ Yes in 2022

Table 1.1.1 – Input request for evaluation Energy democracy [2.1 – Eau et Soleil du Lac]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructures owned by municipalities	N/A	%
Renewable energy infrastructures owned by citizens	3	%
Renewable energy infrastructures owned by private companies	N/A	%
Indicator: Governance model of the energy community		
Number of citizens taking part in energy communities	58	[#]
Number of people participating in decision-making through direct voting system	43	[#]
Representative board election system	one person = one vote	Description of voting system used
Organisational form of EC	Simplified joint stock company	• Associative • Cooperative • Other (Specify ___)

Table 1.1.2 – Input request for evaluation Energy justice – Eau et Soleil du Lac

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	N/A	[%]
Number of citizens taking part in energy communities	43	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and*	2	[#]

regulatory or legal aspects. These activities seek to engage and inform the general public.		
Number of workshops (collective working group on energy communities	4	[#]
Number of people participating workshops	3	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*		[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	60	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	2	[#]
Availability and accessibility of information on energy projects	5	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	N/A	%
Number of collective projects carried out through EC incentives	N/A	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Men involved in the EC (WP6)	70	%
Women involved in the EC (WP6)	30	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	17 % of people under 40	%

Table 1.1.3 – Input request for evaluation Community empowerment [2.1 – Eau et Soleil du Lac]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	0	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)		[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*		[#]
Indicator: New added roles		

Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)		[#]
Number of jobs created	0 direct job 1,1 indirect job	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes		[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	5	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor

The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.1.4 – Input request for evaluation Community wellbeing [2.1 – Eau et Soleil du Lac]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.	N/A	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels or other renewable sources. Creation of a simplified joint stock company Educational activities in school	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No.

Table 1.1.5 – Input request for evaluation Community awareness [2.1 – Eau et Soleil du Lac]

Dimension: Community awareness	**Value**	**Unit of measure**

Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.		
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	N/A	%
Percentage of people who consider energy sustainability a priority for the community	100	%
Percentage of households adopting energy-saving practices	75	%
Level of people's satisfaction with the community's efforts towards energy sustainability	5	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	0	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	N/A	[#]
Number of schools involved in energy awareness initiatives.	1	[#]

Data collection 2nd Pilot site – 2.2 Vezouze en Piémont

- Has the energy community already been established?
  - ✓ Yes in 2019

Table 1.2.1 – Input request for evaluation Energy democracy [2.2 – Vezouze en Piémont]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community		[€]
Renewable energy infrastructure owned by municipalities.	N/A	%
Renewable energy infrastructure owned by citizens.	10	%
Renewable energy infrastructure owned by private companies.	N/A	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	83	[#]
Representative board election system	one person = one vote	Description of voting system used
Organisational form of EC	Simplified joint stock company	• Associative • Cooperative • Other (Specify ___)

Table 1.2.2 – Input request for evaluation Energy justice [2.2 – Vezouze en Piémont]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	N/A	[%]
Number of citizens taking part in energy communities	83	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	1	[#]
Number of workshops (collective working group on energy communities)	1	[#]

Number of people participating workshops	2	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*		[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	15	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	1	[#]
Availability and accessibility of information on energy projects	5	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	N/A	%
Number of collective projects carried out through EC incentives	1	[#]
Economic benefits redistributed among members of the energy community		[€]
Men involved in the EC (WP6)		%
Women involved in the EC (WP6)		%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old		%

Table 1.2.3 – Input request for evaluation Community empowerment [2.2 – Vezouze en Piémont]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)		[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)		[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*		[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)		[#]

Number of jobs created (WP6)	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes		[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	5	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	5	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good

The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.2.4 – Input request for evaluation Community wellbeing [2.2 – Vezouze en Piémont]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.		[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels or other renewable sources. Meetings with stakeholders to implement collective self-consumption	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community		[] Yes. If yes, describe the vision and goals [] No.

Table 1.2.5 – Input request for evaluation Community awareness [2.2 – Vezouze en Piémont]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		

Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.		%
Percentage of people who consider energy sustainability a priority for the community	100	%
Percentage of households adopting energy-saving practices	75	%
Level of people's satisfaction with the community's efforts towards energy sustainability	5	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	0	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.		[#]
Number of schools involved in energy awareness initiatives.	0	[#]

Data collection 3rd Pilot site – 2.3 VercorSoleil

- Has the energy community already been established?
  - ✓ Yes in 2015

Table 1.3.1 – Input request for evaluation Energy democracy [2.3 –VercorSolei]l

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructure owned by municipalities.	N/A	%
Renewable energy infrastructure owned by citizens.	29	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	149	[#]
Representative board election system	one person = one vote	Description of voting system used
Organisational form of EC	Simplified joint stock company	• Associative • Cooperative • Other (Specify ___)

Table 1.3.2 – Input request for evaluation Energy justice [2.3 –VercorSolei]l

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	N/A	[%]
Number of citizens taking part in energy communities	149	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	2	[#]
Number of workshops (collective working group on energy communities	1	[#]
Number of people participating workshops	2	
Number of promotional activities (leaflet distribution, etc.)		[#]

Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.		
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	100	[#]
Number of citizen-led initiatives supported and/or created (WP6) *Citizens' initiatives are grassroots actions created directly by citizens.*	4	[#]
Availability and accessibility of information on energy projects	5	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	N/A	%
Number of collective projects carried out through EC incentives	N/A	[#]
Economic benefits redistributed among members of the energy community		[€]
Men involved in the EC (WP6)	78	%
Women involved in the EC (WP6)	22	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	0% of people below 40	%

Table 1.3.3 – Input request for evaluation Community empowerment [2.3 –VercorSolei]l

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	0	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	46	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*		[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	6	[#]
Number of jobs created (WP6)	0.4	[#]

Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	5	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	2	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	5	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent

Do not know	

4. Knowledge built up by members	Likert scale
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.3.4 – Input request for evaluation Community wellbeing [2.3 –VercorSolei]l

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.		[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels (and maybe other renewable energies in the future) Implementation of an electric car-sharing service School intervention and several educational activities Development of a collective self-consumption project	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	?	[] Yes. If yes, describe the vision and goals [] No.

Table 1.3.5 – Input request for evaluation Community awareness [2.3 –VercorSolei]l

Dimension: Community awareness	**Value**	**Unit of measure**

Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.		
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	0	%
Percentage of people who consider energy sustainability a priority for the community	100	%
Percentage of households adopting energy-saving practices	85	%
Level of people's satisfaction with the community's efforts towards energy sustainability	5	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	0	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	14	[#]
Number of schools involved in energy awareness initiatives.	1	[#]

C. Data Collection Template – RE 3 Germany

Data collection 1st Pilot site – RE 3.1 Elektrizitätswerke Hindelang eG

The reference timeframe is from July 2024 to December 2024. After which data will be collected every 6 months.

- Has the energy community already been established?

✓ Yes, in 1923

Table 1.1.1 – Input request for evaluation Energy democracy [RE3.1 Elektrizitätswerke Hindelang eG]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	1	[#]
Economic benefits redistributed among members of the energy community	8,750	[€]
Renewable energy infrastructure owned by municipalities.	15	%
Renewable energy infrastructure owned by citizens.	85	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	350	[#]
Representative board election system	everyone has ONE vote regardless of their share	Description of voting system used
Organisational form of EC	Cooperative	• Associative • Cooperative • Other (Specify ___)

Table 1.1.2 – Input request for evaluation Energy justice [RE3.1 Elektrizitätswerke Hindelang eG]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	6,2	[%]
Number of citizens taking part in energy communities	350	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities, on the other hand, aim to create awareness by providing broader information about energy*	10	[#]

communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.		
Number of workshops (collective working group on energy communities	0	[#]
Number of people participating workshops	0	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	5	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0 (in Bad Hindelang)	[#]
Number of stakeholders reached through events and media	3.500 (electricity customers)	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	1 (Sonnenwende Hindelang e.V.)	[#]
Availability and accessibility of information on energy projects	4	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population (low-income people, young people, women) benefiting from subsidised energy tariffs	0	%
Number of collective projects carried out through EC incentives	see above (first data category)	[#]
Economic benefits redistributed among members of the energy community	see above (second data category)	[€]
Men involved in the EC (WP6)	70	%
Women involved in the EC (WP6)	30	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	 1 1 1 2 10 30 55	%

Table 1.1.3 – Input request for evaluation Community empowerment [RE3.1 Elektrizitätswerke Hindelang eG]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	4	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	80	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	1 Further projects:	[#]

	- Free and neutral on-site energy consultations for owners of detached and semi-detached houses - Free participation in the lecture evening - Renewable energies in tourist communities: Acceptance analysis - Municipal heat planning	
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	3	[#]
Number of jobs created (WP6)	16	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	4	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	1	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor

The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.1.4 – Input request for evaluation Community wellbeing [RE3.1 Elektrizitätswerke Hindelang eG]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.		[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	Installation of solar panels or other renewable sources.	[]Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives.

		[] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No

Table 1.1.5 – Input request for evaluation Community awareness [RE3.1 Elektrizitätswerke Hindelang eG]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	estimated 5 (see questionnaire survey)	%
Percentage of people who consider energy sustainability a priority for the community		%
Percentage of households adopting energy-saving practices		%
Level of people's satisfaction with the community's efforts towards energy sustainability		On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	newsletter not yet established	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.		[#]
Number of schools involved in energy awareness initiatives.		[#]

Data collection 2nd Pilot site – RE3.2 Dorfenergie eG Eppishausen

The reference timeframe is from July 2024 to December 2024. After which data will be collected every 6 months.

- Has the energy community already been established?

✓ Yes, in 2010

Table 1.2.1 – Input request for evaluation Energy democracy [RE3.2 Dorfenergie eG Eppishausen]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy 99,3%		
Number of collective projects carried out through EC incentives	6 power plants (State feed-in tariff	[#]
Economic benefits redistributed among members of the energy community	21,375	[€]
Renewable energy infrastructure owned by municipalities.	(property of the PV-FF and real estate of the PV roofs) 0% shares in EC	%
Renewable energy infrastructure owned by citizens.	99,3 %	%
Renewable energy infrastructure owned by private companies.	Total of 6 shares held by local companies = 0.7% (of 845 shares)	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	13	[#]
Representative board election system	Election of each board member for 3 years (5 board members) by the members on a show of hands/ in writing , everyone has ONE	Description of voting system used

	vote regardless of their share	
Organisational form of EC	Cooperative	• Associative • Cooperative • Other (Specify ___)

Table 1.2.2 – Input request for evaluation Energy justice [RE3.2 Dorfenergie eG Eppishausen]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	6,2	[%]
Number of citizens taking part in energy communities	140	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities, on the other hand, aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	1	[#]
Number of workshops (collective working group on energy communities	0	[#]
Number of people participating workshops	0	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	1 (Invitation to the information evening in May by e-mail, on the homepage, municipal gazette, regional newspaper)	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	42 (+1000 estimated readers of article in a major district newspaper)	[#]

Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	1	[#]
Availability and accessibility of information on energy projects	3	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	0	%
Number of collective projects carried out through EC incentives		[#]
Economic benefits redistributed among members of the energy community		[€]
Men involved in the EC (WP6)	69	%
Women involved in the EC (WP6)	31	%
Intergenerational diversity in the EC: (WP6) 13# did not give their age, 7# under 18 Between 18 and 24 years old Between 25 and 29 years old Between 30 and 34 years old Between 35 and 39 years old Between 40 and 49 years old Between 50 and 59 years old Over 60 years old	 9,3 5,0 5,7 5,7 0 2,9 9,3 21,4 40,7	%

Table 1.2.3 – Input request for evaluation Community empowerment [RE3.2 Dorfenergie eG Eppishausen]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	5	[#]

Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	1-30	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	2 (local heating network of a private investor) (14 MWp open space PV of a local solar company - Possible financial participation of the EC)	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	13	[#]
Number of jobs created (WP6)	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	13	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	2	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	Do not know	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	4	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	3	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate

The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.2.4 – Input request for evaluation Community wellbeing [RE3.2 Dorfenergie eG Eppishausen]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.		[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	More PV and balcony PV likely after May info evening	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving.

		[] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No

Table 1.2.5 – Input request for evaluation Community awareness [RE3.2 Dorfenergie eG Eppishausen]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	estimated 5	%
Percentage of people who consider energy sustainability a priority for the community		%
Percentage of households adopting energy-saving practices		%
Level of people's satisfaction with the community's efforts towards energy sustainability		On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	newsletter not yet established	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.		[#]
Number of schools involved in energy awareness initiatives.		[#]

Data collection 3rd Pilot site – RE3.3 Elektrizitätswerke Reutte

- Has the energy community already been established?

✓ Not yet founded, we are in the modelling phase

Table 1.3.1 – Input request for evaluation Energy democracy [RE3.3 Elektrizitätswerke Reutte]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Renewable energy infrastructure owned by municipalities.		%
Renewable energy infrastructure owned by citizens.		%
Renewable energy infrastructure owned by private companies.		%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	0	[#]
Representative board election system	-	Description of voting system used
Organisational form of EC	not founded yet	• Associative • Cooperative • Other (Specify ___)

Table 1.3.2 – Input request for evaluation Energy justice [RE3.3 Elektrizitätswerke Reutte]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	6,2	[%]
Number of citizens taking part in energy communities	0	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities, on the other hand, aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	0	[#]
Number of workshops (collective working group on energy communities	0	[#]

Number of people participating workshops	0	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	0	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	0	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	0	[#]
Availability and accessibility of information on energy projects	2	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	0	%
Number of collective projects carried out through EC incentives	0	[#]
Economic benefits redistributed among members of the energy community	0	[€]
Men involved in the EC (WP6)	0	%
Women involved in the EC (WP6)	0	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	-	%

Table 1.3.3 – Input request for evaluation Community empowerment [RE3.3 Elektrizitätswerke Reutte]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	0	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	0	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	1 (Arbeitskreis Energie & Umwelt = local Energy & Environment Working Group in the municipality of Seeg)	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication	1	[#]

of data to the relevant institutional bodies, communication) (WP6)		
Number of jobs created (WP6)	0	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	0	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	4 (on behalf of EWR as part of the EC)	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) **(CHECK THE QUESTIONS BELOW)**	-	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	-	Qualitative (likert scale)
3. Skills required by volunteers (WP6) **(CHECK THE QUESTIONS BELOW)**	-	Qualitative (likert scale)
4. Knowledge built up by members (WP6) **(CHECK THE QUESTIONS BELOW)**	-	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate

The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	**Likert scale**
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.3.4 – Input request for evaluation Community wellbeing [RE3.3 Elektrizitätswerke Reutte]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily-consumption.	-	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to-encourage energy efficiency, renewable energy or other sustainable practices over time.		[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	-	[] Yes. If yes, describe the vision and goals [] No.

Table 1.3.5 – Input request for evaluation Community awareness [RE3.3 Elektrizitätswerke Reutte]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**

Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	estimated 5 (see questionnaire survey)	%
Percentage of people who consider energy sustainability a priority for the community	-	%
Percentage of households adopting energy-saving practices	-	%
Level of people's satisfaction with the community's efforts towards energy sustainability	-	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	newsletter not yet established	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.		[#]
Number of schools involved in energy awareness initiatives.		[#]

D. Data Collection Template – RE5 Greece

Data collection 1st Pilot site – RE5.1 Domokos

The reference timeframe is from July 2024 to December 2024. After which data will be collected every 6 months.

- Has the energy community already been established?

✓ Not

Table 1.1.1 – Input request for evaluation Energy democracy [RE5.1 Domokos]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Renewable energy infrastructure owned by municipalities.	50	%
Renewable energy infrastructure owned by citizens.	10	%
Renewable energy infrastructure owned by private companies.	40	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	-	[#]
Representative board election system	-	Description of voting system used
Organisational form of EC	-	• Associative • Cooperative • Other (Specify ___)

Table 1.1.2 – Input request for evaluation Energy justice [RE5.1 Domokos]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	10	[%]
Number of citizens taking part in energy communities	-	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	5	[#]
Number of workshops (collective working group on energy communities	1	[#]

Number of people participating workshops	-	
Number of promotional activities (leaflet distribution, etc.) *Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.*	5	[#]
Number of demonstrations, strikes, with focus on environmental and climate crisis	-	[#]
Number of stakeholders reached through events and media	-	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	-	[#]
Availability and accessibility of information on energy projects	3	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	-	%
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Men involved in the EC (WP6)	-	%
Women involved in the EC (WP6)	-	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	-	%

Table 1.1.3 – Input request for evaluation Community empowerment [RE5.1 Domokos]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	6	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	23	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	-	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	-	[#]
Number of jobs created (WP6)	-	[#]

Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		
Number of community members involved in energy literacy and skills development programmes	-	[#]
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) (CHECK THE QUESTIONS BELOW)	Very Poor	Qualitative (likert scale)
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects. (WP6) (CHECK THE QUESTIONS BELOW)	Appropriate	On a scale from 1 (a little) to 5 (a lot)
2. Tasks required by volunteers (WP6) (CHECK THE QUESTIONS BELOW)	Poor	Qualitative (likert scale)
3. Skills required by volunteers (WP6) (CHECK THE QUESTIONS BELOW)	Poor	Qualitative (likert scale)
4. Knowledge built up by members (WP6) (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent

Do not know	

4. Knowledge built up by members	Likert scale
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.1.4 – Input request for evaluation Community wellbeing [RE5.1 Domokos]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.	Bicycles, Household appliances, LED light globes, Solar panels	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify _)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	All of the practices are supported by the community but not yet applicable.	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No.

Table 1.1.5 – Input request for evaluation Community awareness [RE5.1 Domokos]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	-	%
Percentage of people who consider energy sustainability a priority for the community	55	%
Percentage of households adopting energy-saving practices	45	%

Level of people's satisfaction with the community's efforts towards energy sustainability	2	On a scale from 1 (a little) to 5 (a lot)
Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	-	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	-	[#]
Number of schools involved in energy awareness initiatives.	2	[#]

Data collection 2nd Pilot site – RE5.2 Kamena Vourla

- Has the energy community already been established?

✓ Not

Table 1.2.1 – Input request for evaluation Energy democracy [RE5.2 Kamena Vourla]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Renewable energy infrastructure owned by municipalities.	45	%
Renewable energy infrastructure owned by citizens.	5	%
Renewable energy infrastructure owned by private companies.	50	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	-	[#]
Representative board election system	-	Description of voting system used
Organisational form of EC	-	• Associative • Cooperative • Other (Specify ___)

Table 1.2.2 – Input request for evaluation Energy justice [RE5.2 Kamena Vourla]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	10	[%]
Number of citizens taking part in energy communities	-	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	3	[#]
Number of workshops (collective working group on energy communities	1	[#]
Number of people participating workshops	10	
Number of promotional activities (leaflet distribution, etc.)	3	[#]

Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.		
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	-	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	-	[#]
Availability and accessibility of information on energy projects	4	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	-	%
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Men involved in the EC (WP6)	-	%
Women involved in the EC (WP6)	-	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	-	%

Table 1.2.3 – Input request for evaluation Community empowerment [RE5.2 Kamena Vourla]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	3	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	10	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	-	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	-	[#]
Number of jobs created (WP6)	-	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		

Number of community members involved in energy literacy and skills development programmes	-	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	3	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) (CHECK THE QUESTIONS BELOW)	Very poor	Qualitative (likert scale)
2. Tasks required by volunteers (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)
3. Skills required by volunteers (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)
4. Knowledge built up by members (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	Likert scale
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.2.4 – Input request for evaluation Community wellbeing [RE5.2 Kamena Vourla]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.	Bicycles, Household appliances	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	All of the practices are supported by the community but not yet applicable.	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No.

Table 1.2.5 – Input request for evaluation Community awareness [RE5.2 Kamena Vourla]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	-	%
Percentage of people who consider energy sustainability a priority for the community	45	%
Percentage of households adopting energy-saving practices	35	%
Level of people's satisfaction with the community's efforts towards energy sustainability	2	On a scale from 1 (a little) to 5 (a lot)

Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	-	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	-	[#]
Number of schools involved in energy awareness initiatives.	-	[#]

Data collection 3rd Pilot site – RE5.3 Amfikleia

- Has the energy community already been established?

✓ Not

Table 1.3.1 – Input request for evaluation Energy democracy [RE5.3 Amfikleia]

Dimension: Energy democracy Energy democracy represents a project to aspire to in order to achieve energy systems that are more decentralised and socially controlled, with fair accessibility, whose consumption does not harm or people nor the environment.	**Value**	**Unit of measure**
Indicator: Shared ownership of energy		
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Renewable energy infrastructure owned by municipalities.	40	%
Renewable energy infrastructure owned by citizens.	5	%
Renewable energy infrastructure owned by private companies.	55	%
Indicator: Governance model of the energy community		
Number of people participating in decision-making through direct voting system	-	[#]
Representative board election system	-	Description of voting system used
Organisational form of EC	-	• Associative • Cooperative • Other (Specify ___)

Table 1.3.2 – Input request for evaluation Energy justice [RE5.3 Amfikleia]

Dimension: Energy justice *Energy justice assumes that the positive or negative effects of the energy system should be distributed equally throughout society. This also includes the development of skills among citizens engaging in EC activities, or among municipal offices, as well as job creation.*	**Value**	**Unit of measure**
Indicator: Inclusiveness and accessibility of information		
Percentage of household income spent on energy	12	[%]
Number of citizens taking part in energy communities	-	[#]
Number of dissemination events (leaflet, poster distribution, video discussion, stands, information days, communication campaigns etc.) *Dissemination activities aim to create awareness by providing broader information about energy communities, their visions, and regulatory or legal aspects. These activities seek to engage and inform the general public.*	4	[#]
Number of workshops (collective working group on energy communities	1	[#]
Number of people participating workshops	11	
Number of promotional activities (leaflet distribution, etc.)	4	[#]

Promotional activities refer to those activities that promote events and initiatives organized to communicate about energy communities. These activities focus on publicizing specific events or actions related to energy communities.		
Number of demonstrations, strikes, with focus on environmental and climate crisis	0	[#]
Number of stakeholders reached through events and media	-	[#]
Number of citizen-led initiatives supported and/or created *Citizens' initiatives are grassroots actions created directly by citizens.*	-	[#]
Availability and accessibility of information on energy projects	3	On a scale from 1 (a little) to 5 (a lot)
Percentage of vulnerable population benefiting from subsidised energy tariffs	-	%
Number of collective projects carried out through EC incentives	-	[#]
Economic benefits redistributed among members of the energy community	-	[€]
Men involved in the EC (WP6)	-	%
Women involved in the EC (WP6)	-	%
Intergenerational diversity in the EC: (WP6) • Between 18 and 24 years old • Between 25 and 29 years old • Between 30 and 34 years old • Between 35 and 39 years old • Between 40 and 49 years old • Between 50 and 59 years old • Over 60 years old	-	%

Table 1.3.3 – Input request for evaluation Community empowerment [RE5.3 Amfikleia]

Dimension: Community empowerment Community empowerment is a process through which individuals and communities acquire the awareness, skills, resources and control necessary to face challenges and improve their living conditions.	**Value**	**Unit of measure**
Indicator: Participation		
Number of events organised to network between participants (aperitif, coffee-cart moments, excursions, neighbourhood working groups, walk-in sessions, etc.)	2	[#]
Number of people participating meetings, assemblies and decision-making processes (if the energy community is established)	11	[#]
Number of energy projects and local initiatives (except EC) *Energy projects and local initiatives are initiatives promoted by stakeholders and public institutions within the territory, independent of energy communities (EC).*	-	[#]
Indicator: New added roles		
Number of volunteers who manage different tasks (such as administration, data protection and acquisition, communication of data to the relevant institutional bodies, communication) (WP6)	-	[#]
Number of jobs created (WP6)	-	[#]
Indicator: Energy literacy (knowledge and understanding that a person has about energy, its use, its sources, and the associated environmental, economic and social impacts)		

Number of community members involved in energy literacy and skills development programmes	8	[#]
Availability of and access to financial, technical and information resources necessary for the implementation of energy projects.	3	On a scale from 1 (a little) to 5 (a lot)
1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved (WP6) (CHECK THE QUESTIONS BELOW)	Poor	Qualitative (likert scale)
2. Tasks required by volunteers (WP6) (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)
3. Skills required by volunteers (WP6) (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)
4. Knowledge built up by members (WP6) (CHECK THE QUESTIONS BELOW)	Appropriate	Qualitative (likert scale)

1. Methods by which marginalised population groups (low-income citizens and young people) are contacted and involved	**Likert scale**
Methods are ineffective, hardly reach the target, low participation	1 - Very Poor
Methods are partially effective, reach the target in a limited way, moderate participation	2 - Poor
Methods are quite effective, reach a significant part of the target audience, good participation	3 - Appropriate
Methods are effective, reach most of the target audience, high participation	4 - Good
The methods are highly effective, reaching almost the entire target audience, maximum participation.	5 - Excellent
Do not know	

2. Tasks required by volunteers	**Likert scale**
Tasks are poorly defined, overly demanding, or unsuitable for volunteers' skills	1 - Very Poor
Tasks are partially defined, sometimes too challenging or not fully adapted to volunteers' skills	2 - Poor
The tasks are fairly well defined, generally appropriate to the volunteers' skills, but could be improved	3 - Appropriate
The tasks are well-defined, appropriate and challenging, well aligned with the skills of the volunteers	4 - Good
Tasks are clearly defined, highly appropriate, challenging and enhancing, and perfectly aligned with volunteers' skills and interests	5 - Excellent
Do not know	

3. Skills required by volunteers	**Likert scale**
Required skills are ill-defined, irrelevant or overly specific, making it difficult to recruit volunteers	1 - Very Poor
The required skills are partially defined, some are irrelevant or too specific, limiting the pool of suitable volunteers	2 - Poor
The required skills are fairly well defined, generally relevant and appropriate, but could be clarified further	3 - Appropriate
The required skills are well defined, relevant and appropriate for the assigned tasks, facilitating the recruitment of suitable volunteers	4 - Good
The required skills are clearly defined, highly relevant, appropriate and enhancing, making volunteer recruitment highly effective	5 - Excellent
Do not know	

4. Knowledge built up by members	Likert scale
Members gain very little knowledge, with little understanding of the topics covered	1 - Very Poor
Members gain limited knowledge, with partial understanding of the topics covered	2 - Poor
Members gain a good amount of knowledge, with a general understanding of the topics covered	3 - Appropriate
Members gain in-depth knowledge, with a solid understanding of the topics covered.	4 - Good
Members gain a very thorough and detailed knowledge, with an excellent understanding of the topics covered	5 - Excellent
Do not know	

Table 1.3.4 – Input request for evaluation Community wellbeing [RE5.3 Amfikleia]

Dimension: Community wellbeing Community well-being is affected by climate change and extreme weather events, which have visible effects on the well-being of individuals and catastrophic impacts on local economies and health systems.	**Value**	**Unit of measure**
Indicator: Impact on quality of life		
Practices implemented to reduce energy consumption daily consumption.	Bicycles, Household appliances	[] use of bicycles and electric cars. [] use of household appliances (washing machine, dishwasher, etc.) when energy production is at its highest. [] Other (Specify ___)
Initiatives promoted or supported by the community to encourage energy efficiency, renewable energy or other sustainable practices over time.	All of the practices are supported by the community but not yet applicable.	[] Installation of solar panels or other renewable sources. [] Creation of local energy cooperatives. [] Educational campaigns on energy saving. [] Promotion of energy consumption practices. [] Other
Presence of social movements on climate change in the local community	No	[] Yes. If yes, describe the vision and goals [] No.

Table 1.3.5 – Input request for evaluation Community awareness [RE5.3 Amfikleia]

Dimension: Community awareness *Through community awareness, people develop an understanding of the links between their daily actions and the impacts on the environment and energy resources.*	**Value**	**Unit of measure**
Indicator: Levels of knowledge		
Percentage of people who use smart meters to monitor energy consumption in real time and identify behaviour and anomalies.	-	%
Percentage of people who consider energy sustainability a priority for the community	39	%
Percentage of households adopting energy-saving practices	34	%
Level of people's satisfaction with the community's efforts towards energy sustainability	2	On a scale from 1 (a little) to 5 (a lot)

Number of users reached by the regional ecosystem newsletter promoting ECOEMPOWER activities (WP6)	-	[#]
Number of collaborations between community groups, local businesses and institutions to promote sustainability.	-	[#]
Number of schools involved in energy awareness initiatives.	-	[#]

BIBLIOGRAPHY

Barnes, Jake, Paula Hansen, Tanja Kamin, Urša Golob, Monica Musolino, and Agatino Nicita. 'Energy Communities as Demand-Side Innovators? Assessing the Potential of European Cases to Reduce Demand and Foster Flexibility'. *Energy Research & Social Science* 93 (November 2022): 102848. https://doi.org/10.1016/j.erss.2022.102848.

Coy, Dominique, Shirin Malekpour, Alexander K. Saeri, and Roger Dargaville. 'Rethinking Community Empowerment in the Energy Transformation: A Critical Review of the Definitions, Drivers and Outcomes'. *Energy Research & Social Science* 72 (February 2021): 101871. https://doi.org/10.1016/j.erss.2020.101871.

Dudka. 'Women in Energy Communities: An Intersectional Analysis of Their Participation'. In *Gender and Energy*, Springer., 2022.

Dudka, Aurore, Giorgios Koukoufikis, and Natalia Magnani. 'Energy Justice: Do Energy Communities' Shareholders Really Care?' Preprint. SSRN, 2023. https://doi.org/10.2139/ssrn.4369290.

Dudka, Aurore, Natalia Magnani, and Georgios Koukoufikis. 'Analysing Perspectives on Capital, Mutual, and General Interest: A Comparative Study of Energy Cooperatives in Belgium and in Italy'. *Energy Research & Social Science* 116 (October 2024): 103665. https://doi.org/10.1016/j.erss.2024.103665.

Dudka, Aurore, Nuria Moratal, and Thomas Bauwens. 'A Typology of Community-Based Energy Citizenship: An Analysis of the Ownership Structure and Institutional Logics of 164 Energy Communities in France'. *Energy Policy* 178 (July 2023): 113588. https://doi.org/10.1016/j.enpol.2023.113588.

Eames, M., and Miriam Hunt. 'Energy Justice in Sustainability Transitions Research'. *Energy Justice in a Changing Climate*, 2013, 46–50.

Fiander, Joseph, Chad Walker, Ian H. Rowlands, Patrick Devine-Wright, Charlie Wilson, Iain Soutar, and Rajat Gupta. 'Energy Democracy, Public Participation, and Support for Local Energy System Change in Canada'. *Energy Research & Social Science* 113 (July 2024): 103526. https://doi.org/10.1016/j.erss.2024.103526.

Hanke, Florian, Rachel Guyet, and Marielle Feenstra. 'Do Renewable Energy Communities Deliver Energy Justice? Exploring Insights from 71 European Cases'. *Energy Research & Social Science* 80 (October 2021): 102244. https://doi.org/10.1016/j.erss.2021.102244.

Jenkins, Kirsten. 'Setting Energy Justice Apart from the Crowd: Lessons from Environmental and Climate Justice'. *Energy Research & Social Science* 39 (May 2018): 117–21. https://doi.org/10.1016/j.erss.2017.11.015.