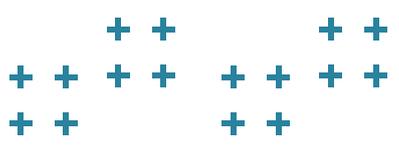




Handbook for a Website supporting energy communities



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Abstract

Welcome to the **Energy Communities Website Handbook**, a comprehensive guide for public administrations to creating a website that promotes and supports energy communities. This handbook will help you structure your website to provide valuable information and resources for individuals interested in energy communities, whether they want to join an existing one or create their own.



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1 Introduction

This handbook aims to assist public administrations in creating a comprehensive website that supports energy communities. The resulting website should provide users with a user-friendly interface, valuable information, and resources to actively participate in or establish energy communities.

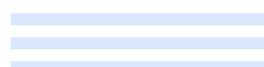


In 2022, the EC² project organized co-creation workshops in Italy, the Netherlands, Poland, and Spain, with stakeholders from the energy sector, energy community members, and citizens. The workshops generated inventive concepts for tools to overcome obstacles and improve facilitation for energy communities, promoting energy citizenship. The most commonly cited features were the requirement for clear information and networking opportunities.

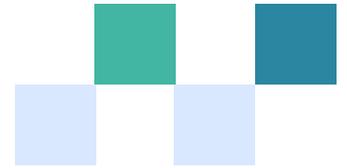
The workshop findings were cross-referenced with existing tools to determine if any of them already included the requested features. The website energiegemeinschaften.gv.at is managed by the Austrian coordination office for energy communities. Its purpose is to provide comprehensive information, which was identified as the most frequently requested objective from the co-creation workshops. Based on the website's contents, we have created a handbook that can be adapted for different countries. However, concerning tools that facilitate networking between practitioners, the original website only provides a map and lacks a communication tool that allows for direct exchange. To address this need for easier communication, we recommend integrating a forum as a tool for such websites. At the end of this handbook, you will find a link to a clickable mock-up of the forum and a short guide to creating a website.



In embarking on the journey to create a website for energy communities, we recognize the diverse regulatory frameworks that exist across different countries. This handbook serves as a comprehensive guide, yet it is essential to note that when implementing these recommendations in a different country, thoughtful adjustments and considerations must be made to align with local requirements. The success of your endeavor lies in tailoring these insights to the specific context of the region in which you operate.



1.1 Key Features



Welcoming Homepage (2.1): A well-designed welcome page is pivotal for an effective website. It serves as the initial point of contact with users, setting the tone for the entire experience. This page should captivate their interest, offer a clear structure and allow easy navigation to the subcategories.

Navigation Bar (2.2): A menu that allows users to navigate between pages is necessary to enable good orientation on the website.

Understanding Energy Communities (2.3): Interested individuals must first gain a solid understanding of energy communities, including their various forms.

Participation Guidance (2.4): The Website offers guidance on how to participate in energy communities and the potential benefits of doing so.

Creating Your Own Community (2.5): For those seeking to establish their own energy community, information on the necessary legal and financial frameworks should be provided.

Financial Clarity (2.6): Detailed information on financial aspects, including tariffs, taxes, and technical requirements, is essential for the successful operation of energy communities.

Frequently Asked Questions (2.7): To address common queries, include a section dedicated to answering frequently asked questions.

Downloadable Resources (2.8): A repository of informational materials such as contract templates, illustrations, and data available for download.

Map (2.9): A map showcases the locations of established energy communities, inspiring and facilitating communication among interested parties.

Good Practice Examples (2.10): Users can explore existing energy communities as case studies, offering a tangible vision of successful implementation.

Videos (2.11): Engaging and informative videos on the topic are conveniently accessible in one location.

Contact Information (2.12): Users can easily find contact details for advisory centers, ensuring they have access to expert guidance.



2 Features of the Website

In the following sections, we'll explain the key features and content structure for your energy communities website in more detail.

2.1 The welcome page

Start with a visually appealing and engaging welcome page to introduce visitors to the topic of energy communities. The welcome page should be well-designed, structured, and provide easy navigation to the various sections of the website. It should encompass:

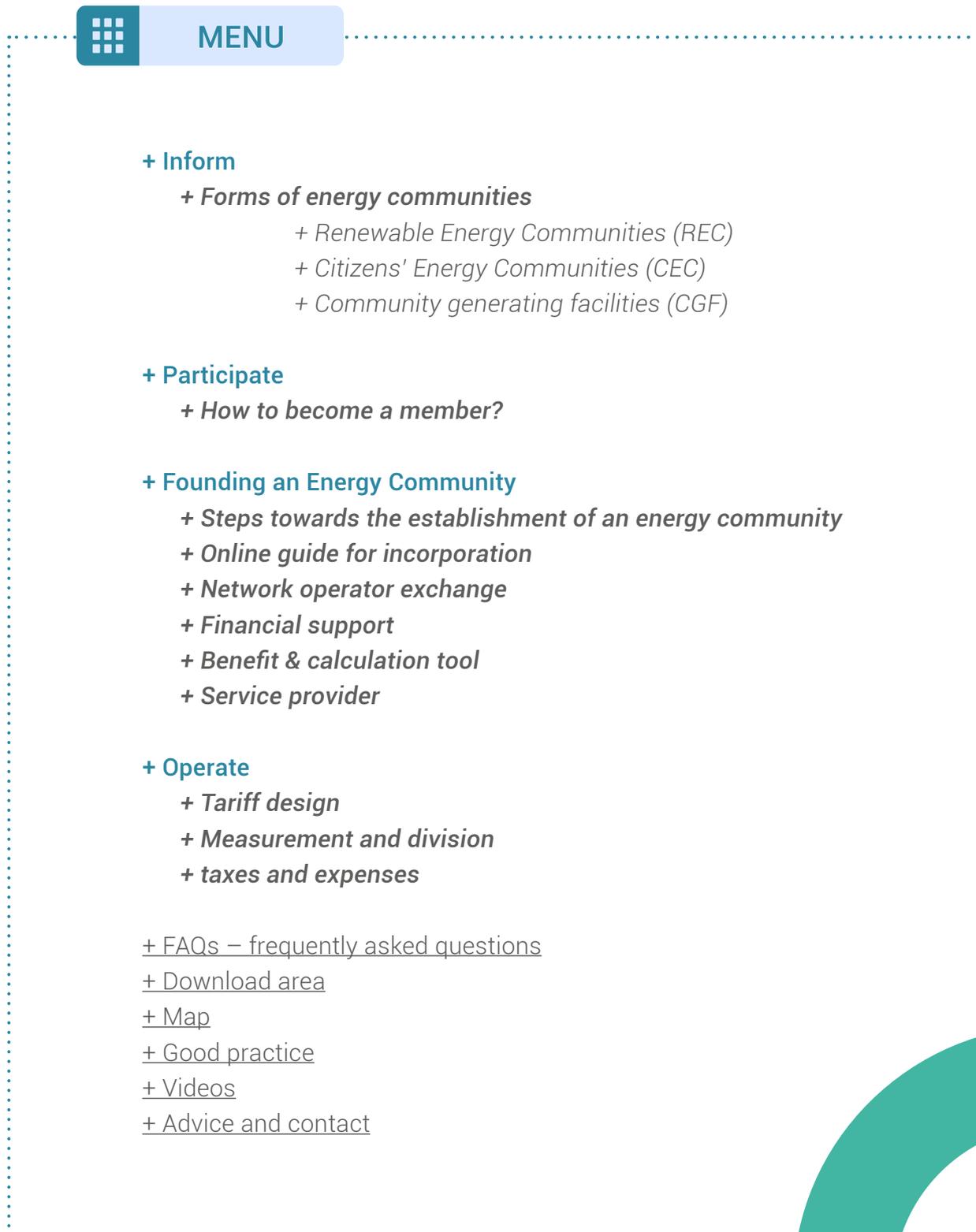
- An explanation of the purpose of CECs (citizen energy communities) and RECs (renewable energy communities)
- A brief description of energy communities and their advantages
- An animated video explaining energy communities (or alternative visuals like illustrations or photos)
- Space for current news or events related to energy communities
- Contact information of the website's administrators
- The menu



Figure 1 Top of the start page of the Austrian Website

2.2 The Navigation Bar (menu)

To allow the users to navigate to the various sections of the website a menu is needed. We recommend that the menu has **4 main categories** with *subcategories* and 6 smaller categories. The menu should be placed in the header for a good website orientation. Consider implementing a dropdown menu for user-friendly navigation. The menu could look like this:



2.3 Inform

Provide an informative section explaining what energy communities are, their purpose, and the different forms they can take. Highlight the benefits of participating in energy communities, such as reduced energy costs, sustainability, and community collaboration. Under the "Inform" tab in the menu, you'll find the subpage "Forms of Energy Communities".

2.3.1 Forms of energy communities

It is particularly important to give interested citizens an overview of the forms of energy communities that exist in their country, as the status of implementation varies widely across different countries or regions. Where citizens are called to become active, they have to know about the situation in their respective countries or regions, therefore this subpage compares the different types of energy communities which are explained on further sub-pages. This might need to be adopted for your country. For example, in Austria there are these three types:

- Renewable energy communities (generate, store, consume or sell energy (electricity, heat or gas) from renewable sources, using the facilities of the grid operator and must be located within the concession area of a single network operator)
- Citizen energy communities (generate, store, consume or sell only electrical energy, are not limited to renewable sources and can extend across the concession areas of several network operators throughout Austria)
- Community generation facilities (generate electricity on the building which is used by several "participating beneficiaries" who are all are connected to the same main line, have a common generation plant and no public grid is used)



Figure 2 Types of RECs in Austria

All three subpages have the same structure and should incorporate:

- Concise explanatory text for overview
- Optional illustrations for visual appeal
- Detailed Description of the Energy Community Form
- Graphic illustration of the operational mode
- Excerpt from relevant Legislation
- Listing of advantages



2.4 Participate

This page offers comprehensive information on participation in energy communities, its benefits, and essential considerations. The "Participate" tab in the menu features the subpage "How to Become a member?".

2.4.1 How to become a member?

Offer detailed information on how individuals can become part of existing energy communities and what advantages this brings. Explain the steps to get involved, the requirements, and the application process. Additionally, it is advisable to include a video that highlights the potential of energy communities.

2.5 Founding an Energy Community

This page serves as an exhaustive resource on the founding process of energy communities. It encompasses decisions and initiatives required from the initial planning stage through the ongoing operation. Factors like the right composition, suitable organizational structures, and cooperative engagement with grid operators are pivotal for success. Furthermore, it delves into the necessary formalities and compliance aspects. The establishment of an energy community can present different hurdles, different legal frameworks and different opportunities in different countries. Please find out about the conditions in your country.

The information is segmented into six subpages:

- Steps towards the establishment of an energy community
- Online guide for incorporation
- Network operator exchange
- Promotion
- Benefit & calculation tool
- Service provider



2.5.1 Steps towards the establishment of an energy community

This subpage describes the steps required to establish an energy community and offers valuable tips. There is also an explanatory video.

2.5.2 Online guide for incorporation

This online guide offers a systematic approach to the establishment of an energy community. It guides users through the steps required, that were described on subpage 2.5.1. This subpage provides to-do lists, links, videos, descriptions, and downloads. The online guide includes seven steps, which could vary in other countries:

- Initial Considerations & Concept
- Founding of the association
- Internal agreements
- Registration as a market participant
- Contract with the network operator
- Registration at the FDFA User Portal
- Ongoing operations

I completed the following tasks:

- Goals and roles defined
- Production and consumption go together
- Close range query carried out

Figure 3 Check List for tasks in the Online Guide

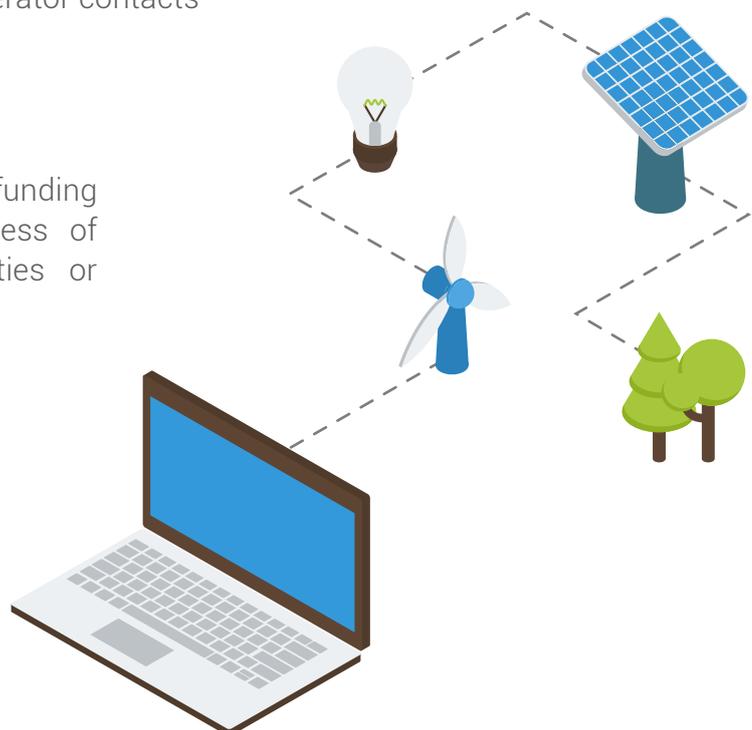
2.5.3 Network operator exchange

This subpage details the information to be shared with the network operator and the procedures for doing so. It encompasses:

- Information the network operator needs from the energy community
- A Network sample contract
- Insight into energy data exchange and its legal background
- A comprehensive list of network operator contacts

2.5.4 Financial support

This subpage offers information on funding programs, if available, to raise awareness of financial support for energy communities or photovoltaic systems in the country.



2.5.5 Benefit & calculation tool

- The **Benefit Tool** allows simulation of crucial aspects of an energy community, offering insights into self-sufficiency, electricity utilization, and CO2 savings. It also tracks the impact of adding a new member. One enters power consumption, output of pure generation plants (photovoltaics, small hydropower or wind) and battery storage and receives information on consumption and generation. The tool should be user-friendly, visually engaging, and applicable to citizen energy communities.

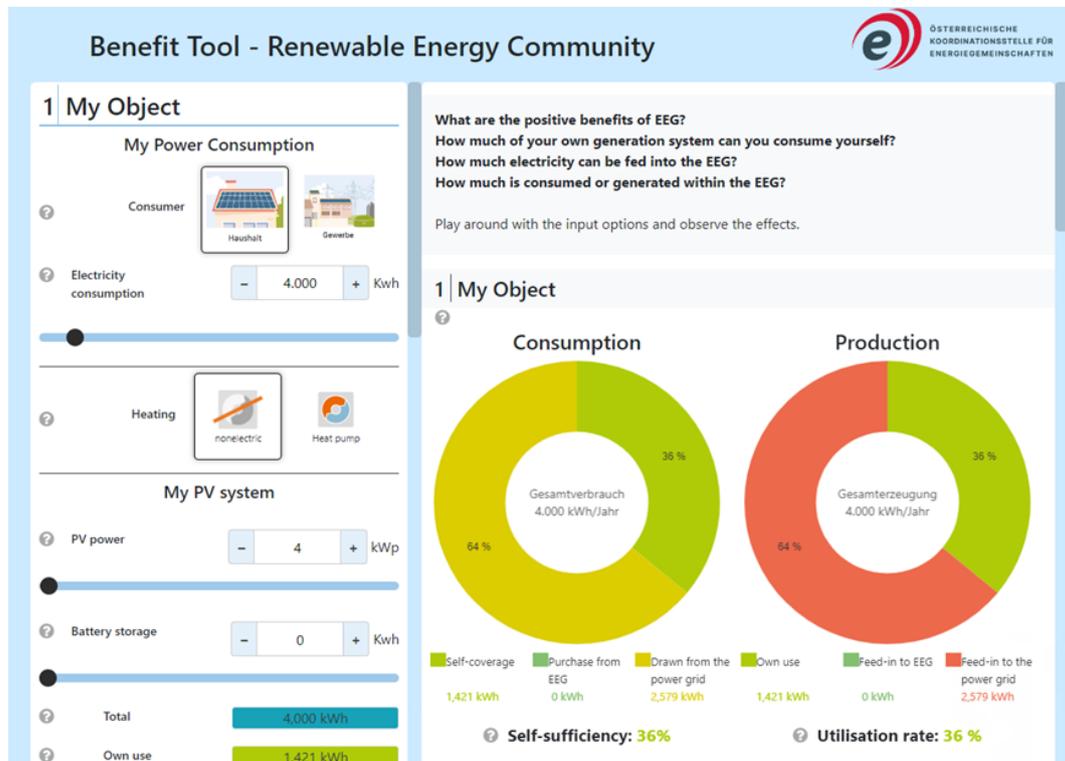


Figure 4 Benefit tool

- The **calculation tool** is designed to provide an initial estimate of the economics of an energy community, not a detailed calculation of costs incurred. The calculation tool should be downloadable in form of an Excel list. On the Austrian website, two different Excel tools are provided: (1) Renewable energy community with PV systems and (2) Renewable energy community with PV systems and storage. An instructions-guide through the Excel tool, which can be downloaded, should also be available.

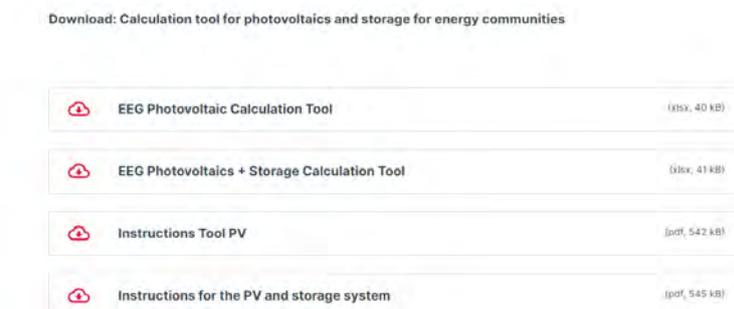
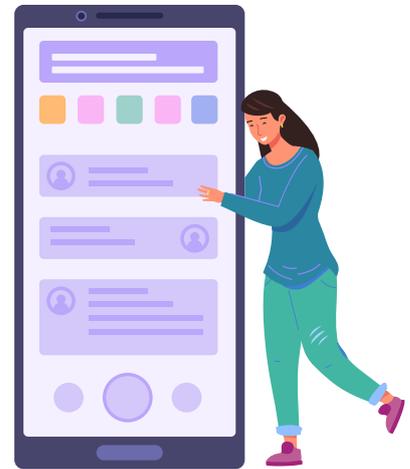


Figure 5 Calculation Tool

2.5.6 Service provider

This subpage assists users in finding service providers for their energy communities and includes contact information for companies offering relevant services. Only companies that offer at least one service specific to energy communities are listed. Registration on this list is open to all providers who agree to comply with the “Code for Service Providers”. Examples for services are:

- Project development & conceptualization
- Organizational consulting
- Operation
- Billing
- Software/hardware & energy management
- Financing
- Legal advice
- Planning & construction
- Advice on community generation plants



2.6 Operate

Clarify administrative and financial aspects, including tariffs, taxes, and technical requirements necessary for the successful operation of energy communities.

The “Operate” tab in the menu includes three subpages:

• [Tariff design](#)

• [Measurement and division](#)

• [Taxes and charges](#)

2.6.1 Tariff design

This subpage explains the various tariff options available to energy communities and helps them develop a model that suits their specific community. It includes information on typical tariffs (membership fee, price of work and basic charge) and various tariff models. Tariff models could vary in different countries.

2.6.2 Measurement and distribution

This subpage discusses energy sharing and the role of communicative smart meters. It should include information about energy distribution, measurement, transmission of measured values, and current distribution. An illustrative graphic can help people to understand it better.

2.6.3 Taxes and charges

This subpage addresses the tax obligations and regulatory compliance that energy communities often need to consider as entrepreneurial entities generating revenue.



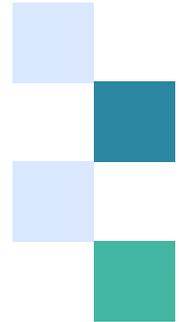
2.7 FAQs - frequently asked questions

This page serves as a quick reference for individuals seeking answers to common queries. It should include explanations of important terms and answers to frequently asked questions.

2.8 Download area

The download area offers valuable resources for users, allowing them to access essential materials. It should encompass:

- Informational materials
- Infographics as visual representations of data and concepts
- Illustrations to serve as visual aids for better understanding
- Data sets and relevant statistics
- Contract templates for community generation, renewable energy communities, and citizen energy communities



The screenshot shows a website interface with a navigation menu at the top: "All", "Graphics", "Data", and "Contracts" (which is underlined). Below the menu, there are four contract templates displayed in a grid:

- Statuten §§**
Statutes for the operation of a joint generation plant as an association.
Status: June 2023, file format: Word-DOC
- Vertrag §§**
Contract for the construction and operation of a joint generation plant in accordance with the legal requirements (§ 16a para. 4 EIWOG).
Status: June 2023, file format: Word-DOC
- Vertrag §§**
Model agreement for the construction of a GEA between the building/plant owner and tenant
Status: September 2023, File format: Word-DOC
- Vertrag §§**
Contract regulating the relationship between the operator(s) of a joint generating installation and the owner(s) of the roof area.
Status: June 2023, file format: Word-DOC

Figure 6 Download Area (GEA = „gemeinschaftlichen Erzeugungsanlage“ = joint generation plant)



2.9 Map

A map integrated into the website can serve as a platform for inspiration and collaboration with peer energy communities. It facilitates communication not only with prospective members looking for RECs to join in their region, but also with other communities, enabling the exchange of challenges, solutions, and experiences. The map is also a valuable tool for promoting your energy community and attracting new members. It should feature:

- A map displaying registered renewable energy communities and citizen energy communities
- A List Format offering the map's information as a list for convenience

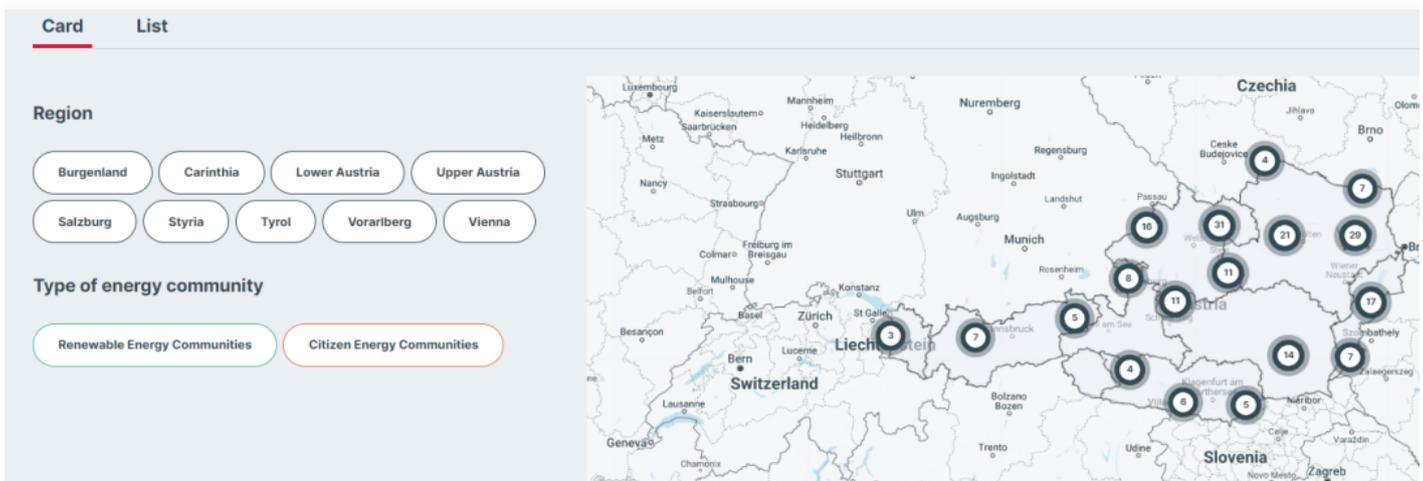


Figure 7 Map

2.10 Good Practice

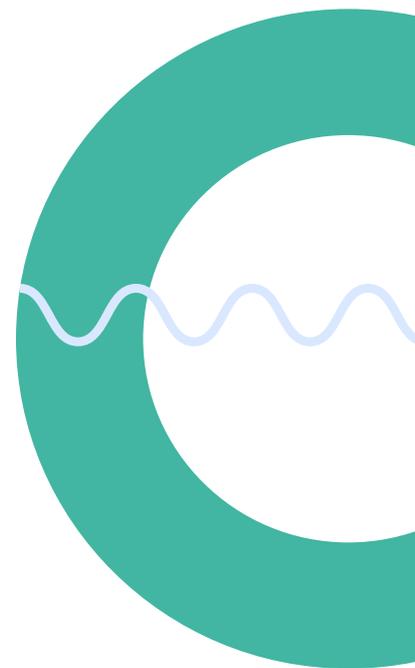
Showcase successful energy communities as real-world examples. Share case studies and stories to help users understand how these communities function. Include Videos of these communities if available.

2.11 Videos

Curate a collection of informative and educational videos related to energy communities. Organize these videos in one easily accessible section for users to watch and learn.

2.12 Advice and contact

Provide contact details for advice centers or individuals who can offer assistance or answer specific queries regarding energy communities.



3 Forum

Explore the option of integrating a forum where users can communicate with each other. Keep in mind that forums require maintenance, so assess whether you have the necessary resources to sustain it. We have already created a prototype for a forum, which is also available.

[Clickable preview of the forum](#)



[Link to the Figma template](#)



4 How to create a website

Creating a website involves several steps:

4.1 Choose a website type

First of all, you should ask yourself what type of website is best suited for your project. A simple website includes a welcome home page and a few subpages, with further information to provide. A complex website can have many subpages and integrated functions like Forums and comment functions or Integrated third-party apps. Which one to choose depends of course very much on the budget and the capacities.

4.2 Decide How to Create Your Website

You can either engage a professional designer to build your website or take on the task yourself. Hiring a professional designer offers the advantage of experience and expertise. Designers can provide valuable guidance, ask pertinent questions, and offer suggestions. Creating your website by yourself allows for cost savings and the freedom to implement your ideas. However, it may require more time and hands-on effort. The choice between the two also depends on your budget. Designers may charge substantial fees, while you can create your own website for almost free.

4.3 Plan your website

With the foundational decisions made, you can commence the actual website creation. The provided template can simplify the page structure, but feel free to adapt it to your specific needs. Ensure your website serves its users, considering their perspective. Decide on design elements, including colours and fonts and choose suitable templates.



4.4 Create the pages of your website

Some pages are essential, while others are optional. The template provides a description of possible pages, helping you decide which to include and which to omit.

4.5 Design and create your website

A well-designed website is crucial as visitors form an impression within seconds. Elements like web design play a pivotal role. Consider the following aspects for an effective website layout:

- **The Header.** The top section where key features and navigation, like a menu and call-to-action buttons, are typically placed.
- **The Footer.** Located at the bottom of the website, this section links to important content like privacy policies, imprints, and contact information.
- **The Navigation Bar (Menu):** An important anchor for website orientation, placed in the header. For complex websites, consider implementing a dropdown menu for user-friendly navigation.
- **The Body (Main Content):** This middle section conveys information through sections, text fields, images, videos, and graphics.
- **The Title Image:** Often the first image or visual element located below the header, it's essential for capturing visitor attention.

4.6 Find the right domain and register it

Select an appropriate domain name for your website and proceed with domain registration.

5 Suggestions and Tips for Your Website

- Ensure that the website is mobile-friendly, as many users will access it from their smartphones or tablets.
- Implement a user-friendly navigation menu to make it easy for visitors to find the information they need.
- Use clear and concise language to explain complex concepts and technical details.
- Optimize the website for search engines (SEO) to increase its visibility on the internet.
- Use a clean and intuitive design with a consistent colour scheme and branding.
- Ensure the website loads quickly, as slow loading times can deter users.
- Test the website on various browsers and devices to ensure compatibility.
- Keep the website's content up-to-date and relevant to your audience.
- Regularly review user feedback and make improvements based on their suggestions.



6 Help from the Internet

The Website "How to Make a website: free Step-By-Step Guide" may help you to create your own website:

<https://websitesetup.org/>



7 References

Klima- und Energiefonds 2021 (2023, 03. November). Gemeinschaft schafft Energie. <https://energiegemeinschaften.gv.at/>

Websitesetup (2023, 03. November). How to Make a Website: A free, step-by-step guide for making a website in an hour or less. <https://websitesetup.org/>

8 Conclusion

By following this handbook, you can create an informative and engaging website for energy communities, helping individuals connect, learn, and collaborate to promote sustainable energy practices.

Good luck with your project!





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