ENERGY COMMUNITY ENGAGEMENT

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Deliverable

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Project Executive Summary

This document provides an overview of the interim results on community engagement activities, collected and analyzed during the first 12 months of the project. It reflects the early progress, methodologies, and insights gathered across the pilot cases, offering a preliminary understanding of how communities are being engaged in the development of Energy Communities (ECs) and Positive Energy Districts (PEDs). These findings lay the groundwork for more comprehensive analysis, which will be presented in the final deliverable 4.2 scheduled for release at month 24 of the project. That upcoming deliverable will include a full evaluation of community engagement strategies, their effectiveness, and the lessons learned, providing a deeper understanding of their impact across different national and local contexts.

Energy4All: Energy as a common pool resource

Energy can be conceived as a public resource that should be accessible to all. The human dimension therefore plays an important role in the design and implementation of Positive Energy Districts (PEDs) and Energy Communities (ECs). In the ENERGY4ALL project, energy communities include not only a set of households producing and consuming energy, but also common users of a public resource, such as the industrial and civic sectors. By exploring different ECs elements through four pilot studies in Stavanger (Norway), Styria (Austria), Budapest (Hungary) and Rome (Italy), the project strives to provide insights into how participatory energy governance practices affect the success of PEDs/ECs.

Deliverable executive summary

Energy can be defined as commons, a public resource that should be accessible to everyone. This view makes the human dimension a key factor in the design and implementation of Positive Energy Districts (PEDs) and Energy Communities (ECs). In the ENERGY4ALL project, energy communities are not limited to households generating and consuming energy but also include broader public resource users, such as industrial and civic sectors. The project particularly concentrates on the human aspect of PEDs and ECs which examines the relationships between different interested stakeholders of such communities.

By studying different aspects of PEDs and ECs through six pilot studies in Stavanger (Norway), Styria (Austria), Budapest (Hungary), and Rome (Italy), the project aims to explore how participatory energy governance influences the success and sustainability of PEDs and ECs.

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1 The communities

In Austria we have to two pilot cases: in Lebring- St. Margarethen and in the region GU-Süd. Both of them are located in Styria. Lebring- St. Margarethen is a municipality about 25 kilometres south of the Styrian capital Graz and about 160 kilometres south of the capital Vienna (see Figure 1). The political district is called Leibnitz.

The six municipalities of Fernitz-Mellach, Gössendorf, Hart bei Graz, Hausmannstätten, Raaba-Grambach and Vasoldsberg have been working together since 2001 in the inter-municipal, non-profit development association “Graz-Umgebung-Süd”. This is a regional transport and economic partnership in the Styrian district of Graz-Umgebung. The aims of the partnership are coordination of municipal tasks, joint development and financing of projects, improvement of local public transport, coordination of business relocations and expansion of local recreational activities (GU Süd o.J.). All six municipalities are south(-east) of the Styrian capital Graz.

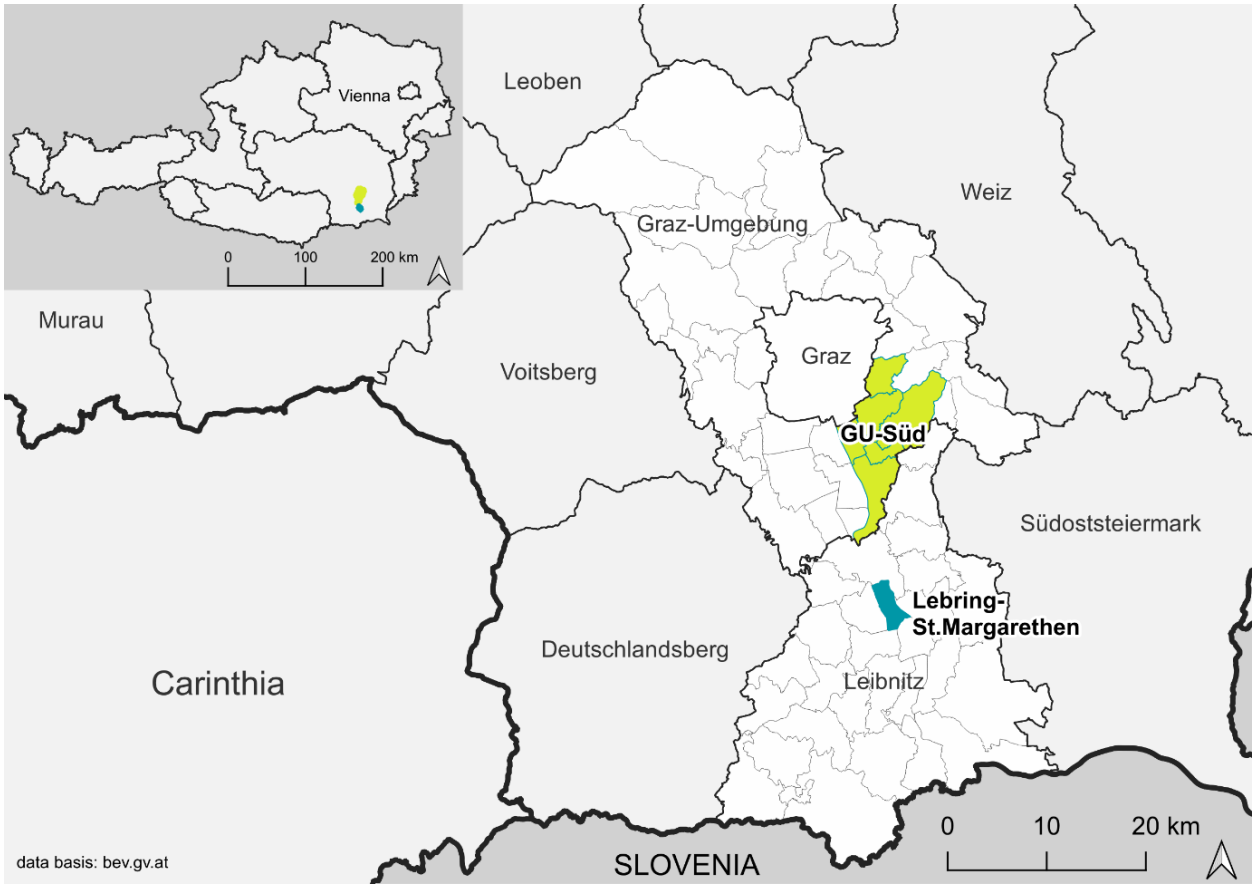


Figure 1: Location of the pilot cases in Styria (Source: BEV 2023, author's illustration 2024)

1.1 Social context

The population in Lebring-St. Margarethen has been rising steadily since the 1950s. From 1,251 residents in the year 1951 to 2 281 residents in 2024 (Statistik Austria 2024s). According to the urban-rural typology of Statistics Austria, the municipality Lebring- St. Margarethen is a rural area surrounding centres (central). The urban-rural typology is a supplement to the international typologies in use, in which urban and rural areas are subdivided on the basis of structural (population, economy) and functional characteristics (Statistik Austria 2021). In the

energy mosaic, Lebring- St. Margarethen is classified as a municipality with industrial and commercial production. This classification applies to municipalities with an important function as an industrial and commercial production site. Industry and commerce account for a significant proportion of energy consumption and greenhouse gas emissions (Abart-Heriszt, Reichel 2022).

Around 55 percent of the population are employed, of which 4.4 percent are unemployed. 52 per cent of those who are not employed (around 1,000) are retired and 31 per cent are under the age of 15 and are not available to the labour market (Statistik Austria 2024e).

The residents have a university graduate rate of 11.5 per cent in the 25-64 age group, with women having a slightly higher rate of 12.3 per cent. 41 per cent of the population have completed an apprenticeship and 21 per cent have completed compulsory schooling (Statistik Austria 2024j).

The average gross annual income per person in the district of Leibnitz was around 37,000 euro in 2022. This is lower than the overall average for Styria, which is around 37,200 euro (Land Steiermark 2023), but higher than the overall average for Austria of 32,834 euro (Statistik Austria 2024v).

All municipalities in Graz-Umgebung-Süd together have a population of 28,200 in 2024. Since the 1960s, the population has risen significantly from 9,800 residents. Hart bei Graz is the most populous municipality in the region (Statistik Austria 2024o, 2024p, 2024q, 2024r, 2024t, 2024u). According to the urban-rural typology of Statistics Austria, all six municipalities are urban centres (large) (Statistik Austria 2021). In the energy mosaic the six municipalities in the region are differently classified. Fernitz-Mellach and Vasoldsberg are municipalities with primarily residential function, Gössendorf, Hart bei Graz and Raaba-Grambach are classified as municipalities with industrial and commercial production and Hausmannstätten is classified as residential municipality with services (Abart-Heriszt, Reichel 2022).

The total labour force of the region includes around 15,000 people of which 3 per cent are unemployed. Additionally, there are around 13,000 non-employed persons. 48 per cent of those who are not employed are retired and 34 per cent are under the age of 15 and are not available to the labour market (Statistik Austria 2024g, 2024b, 2024a, 2024d, 2024c, 2024f).

The region has an average university graduate rate of 24.3 per cent in the 25-64 age group. Hart bei Graz has the highest rate with 34 per cent of its population and Fernitz-Mellach has the lowest rate with 16.7 per cent (Statistik Austria 2024h, 2024i, 2024n, 2024m, 2024k, 2024l).

The district of Graz-Umgebung, which includes the municipalities in the GU-Süd region, has an average gross annual income of EUR 42,200. This is the highest average gross annual income in Styria.

At this stage, the project partners found that energy poverty is a minor issue in the region, due to high income levels, and therefore not a central concern. Instead, the primary motivations for forming energy communities are different. The desire for greater independence and autonomy from large energy suppliers is driving many households and communities to join communities.

Another key factor is the existence of a robust legal framework that supports the establishment and operation of energy communities. These regulations provide clear structures and incentives to share and produce renewable energy locally. In addition, several companies, such as So-Strom, have been set up to support the establishment and management of energy communities. Conducting interviews with mayors would be a good option for a methodological investigation of these motivations.

1.2 Stakeholder targeting

The two Austrian pilot initiatives follow a top-down approach, characterized by a strong presence of public administration. As illustrated in Figures 2 and 3, the actors with the highest level of involvement—positioned closest to the center—are also those with the greatest decision-making power. This influence stems either from the natural role of public authorities or from property ownership rights. This structure significantly simplifies the process of identifying and engaging additional stakeholders.

The composition of stakeholders follows the model of quadruple helix[1], in which the stakeholders can be divided between public and private actors, research and NGOs. In this sense, the main stakeholders can be grouped as shown in above-mentioned Figures:

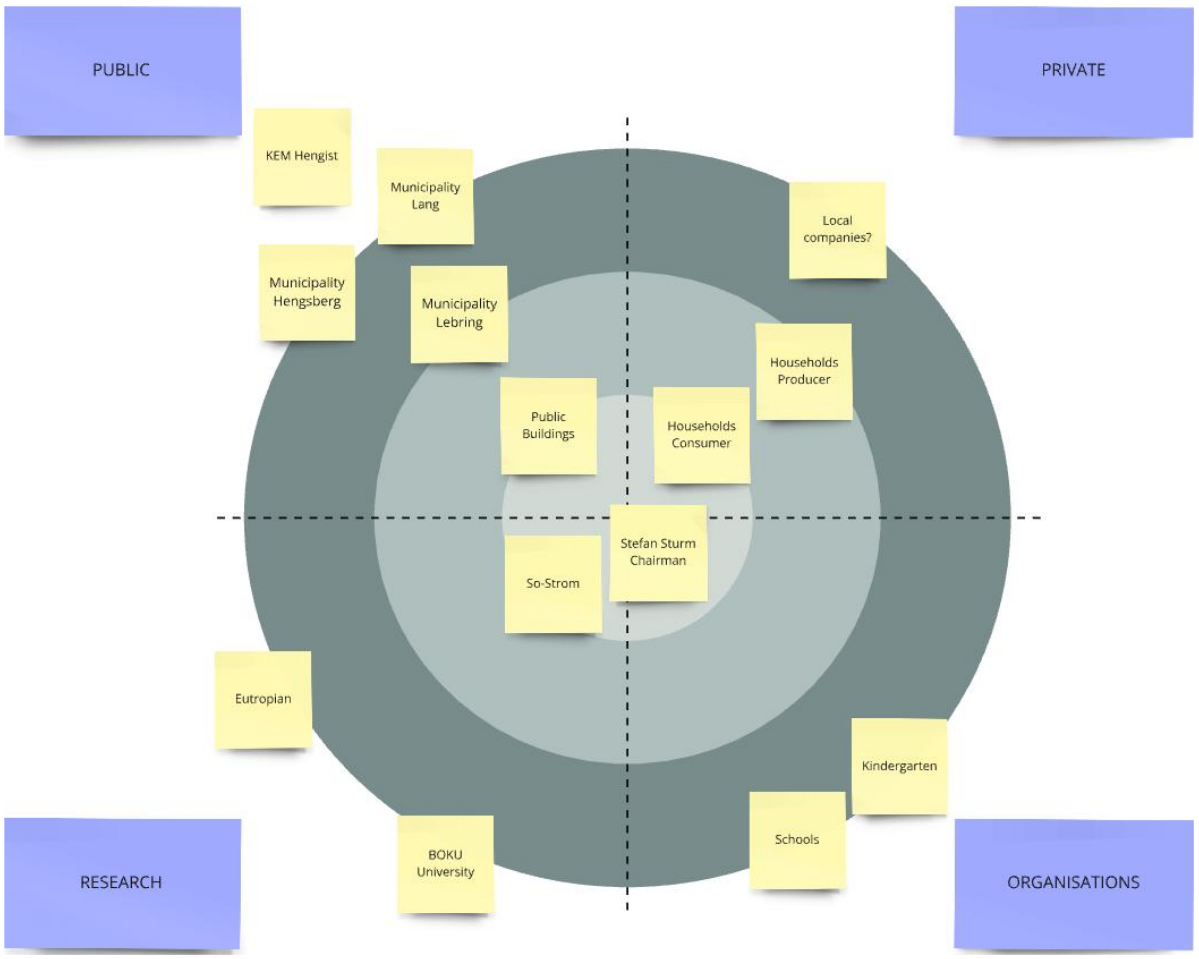


Figure 2: Relevant Stakeholders and their level of involvement in the energy community Lebring- St.Margarethen

[1] Elias G. Carayannis and David FJ Campbell, "'Mode 3'and'Quadruple Helix': Toward a 21st Century Fractal Innovation Ecosystem," *International Journal of Technology Management* 46, no. 3–4 (2009): 201–34.

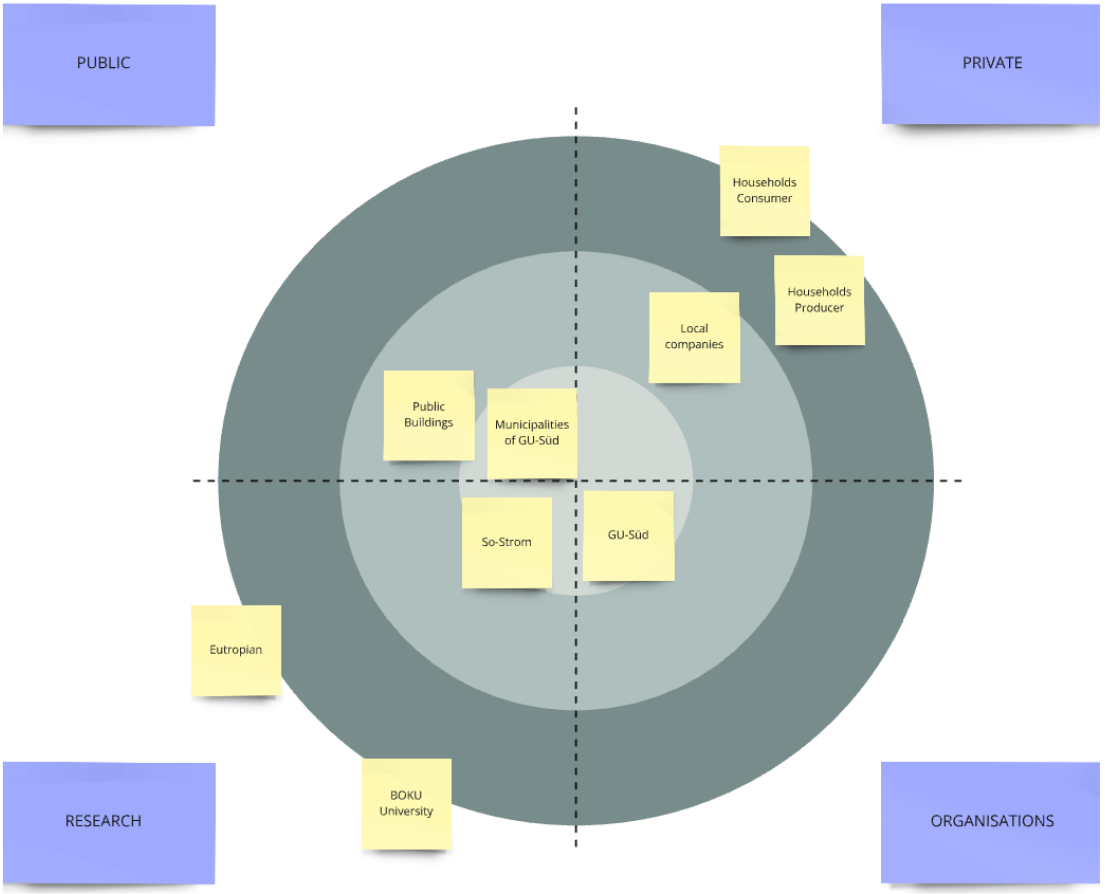


Figure 3: Relevant Stakeholders and their level of involvement in the energy community GU-Süd

1.3 Key roles and interactions

In the energy community in Lebring- St. Margarethen is organised as an association and run by volunteers. Stefan Sturm is the chairman and key actor. He is the founder and chairman of the energy community and also a representative of the municipality. He is supported by further members of the executive port: Nicola Ozko (deputy chairman), Peter Riedl (secretary), Hans-Peter Zametter (Treasurer).
So-Strom GmbH provided support throughout the entire planning and foundation process. Their running key role is the simple administration and member management as well as tax-compliant billing by their digital platform (So-Strom-Digital).

The Erneuerbare Energiegemeinschaft GU Süd eGen is organised as a cooperative and the mayors of all 6 municipalities are on the board of the cooperative. All mayors have been pursuing common goals in the areas of transport, mobility and now also energy for many years. They are supported by the municipal administrations.
Robert Tulnik is the central figure in the GU South region. He is mayor of Fernitz-Mellach and chairman of GU-Süd. Further mayors: Gerald Wonner (Gössendorf), Jakob Frey (Hart bei Graz), Patrick Dorner (Hausmannstätten), Karl Mayrhold (Raaba Grambach) und Johann Wolf-Maier (Vasoldsberg).

So-Strom GmbH provided support throughout the entire planning and foundation process including presentations to the environmental committee. Their running key role is the simple administration and member management as well as tax-compliant billing by their digital platform (So-Strom-Digital).

The six municipalities and their mayors are also supported by So-Strom in the development of the energy community.
The further engagement of the relevant stakeholders, particularly those belonging to the private sector (households and individuals) is foreseen in the upcoming years of the project.

2 Creating the energy communities

In September 2023, the regional renewable **energy community Lebring-St. Margarethen** was founded in the form of an association ("Erneuerbare Energiegemeinschaft (EEG) Lebring-St. Margarethen"). The association aims to promote energy from renewable energy sources, considering environmental, economic and social advantages for its region and its partners, especially through the regional production, storage, use and sale of energy from renewable sources. Furthermore, purchasing renewable energy from members of the association is an integral part (EEG 2023, 2–3). The energy community was founded as a private initiative with private individuals as members. This EC has seen substantial growth and success, primarily due to effective citizen involvement.

In September 2024 the municipalites Lebring-St. Margarethen (66 energy counting points), Lang (43 energy counting points) and Hengsberg (36 energy counting points) joined the community. These municipalities are part of the culture region Hengist https://www.hengist.at/. Consequently the EC will be renamed in **Erneuerbare Energiegmeinschaft Hengist+**. Their participation will further increase the attractiveness of the energy community.

Currently, there are 123 members. The outlook points to strong growth. The EC is a growing factor for regional energy autonomy and strengthens social cohesion.

The planning process for **the EC GU Süd** started in **May 2023** and was supported by So-Strom GmbH and 4ward Energy Solutions GmbH with the expertise in technical, organisational and financial expertise. In **July 2024**, the six municipalities of GU-Süd founded the "**Erneuerbare Energiegemeinschaft GU Süd eGen" cooperative**. The aim is to establish two regional renewable energy communities in order to gain greater regional enery autonomy, particularly in times of crises. It can also reduce energy costs - for the municipalities themselves, but also for SMEs and private households. This is an important factor in combating energy poverty and promoting social cohesion.

The energy community is currently being technically commissioned in the E-Werk Purkharthofer grid with the municipalities itself. The energy exchange is scheduled to start in December 2024. After a pilot phase of 2-3 months, it will be opened up to SMEs and subsequently also to private households. However, the initiative lies with the municipalities. This is a different approach to Lebring, where the initiative lay with the citizens. The comparison after a longer accompanying phase will show where the success factors are for the respective approaches.

After the pilot phase and depending on the announced amendment to the Energy Industry Act, the second energy community is to be established in the E-Netze Steiermark grid.

Plans are also currently underway for public communication and information for all residents and businesses in the municipality.

2.1 Energy community engagement activities

In February 2024, two initial online meetings were held with the municipality of both pilot cases to establish alignment with local goals and gather information and support for the project. These

meetings laid the groundwork for the project's activities and secured valuable input from representatives.

In July 2024, project partners (BOKU University, So-Strom, Eutropian and the University of Stavanger) made a visit to the community to strengthen ties and gain insight into the pilot cases in Austria. During the two-day visit, meetings were held with each of the Chairmen of the Energy Communities.

So-Strom also supported **EC Hengist+** at the initial information event in February 2024 and is always available to answer questions from the energy community and its members.

Municipality channels, word of mouth and communication via associations have a high level of trust among future members and are an important factor in the growth of the energy community.

In the last 4 months (September till November 2024) an iportant focus was the development of website, for which So-Strom provided project management and important content for implementation: https://www.eeg-hengistplus.at/. Facebook is now also being used for community building https://www.facebook.com/profile.php?id=61568610493577 .

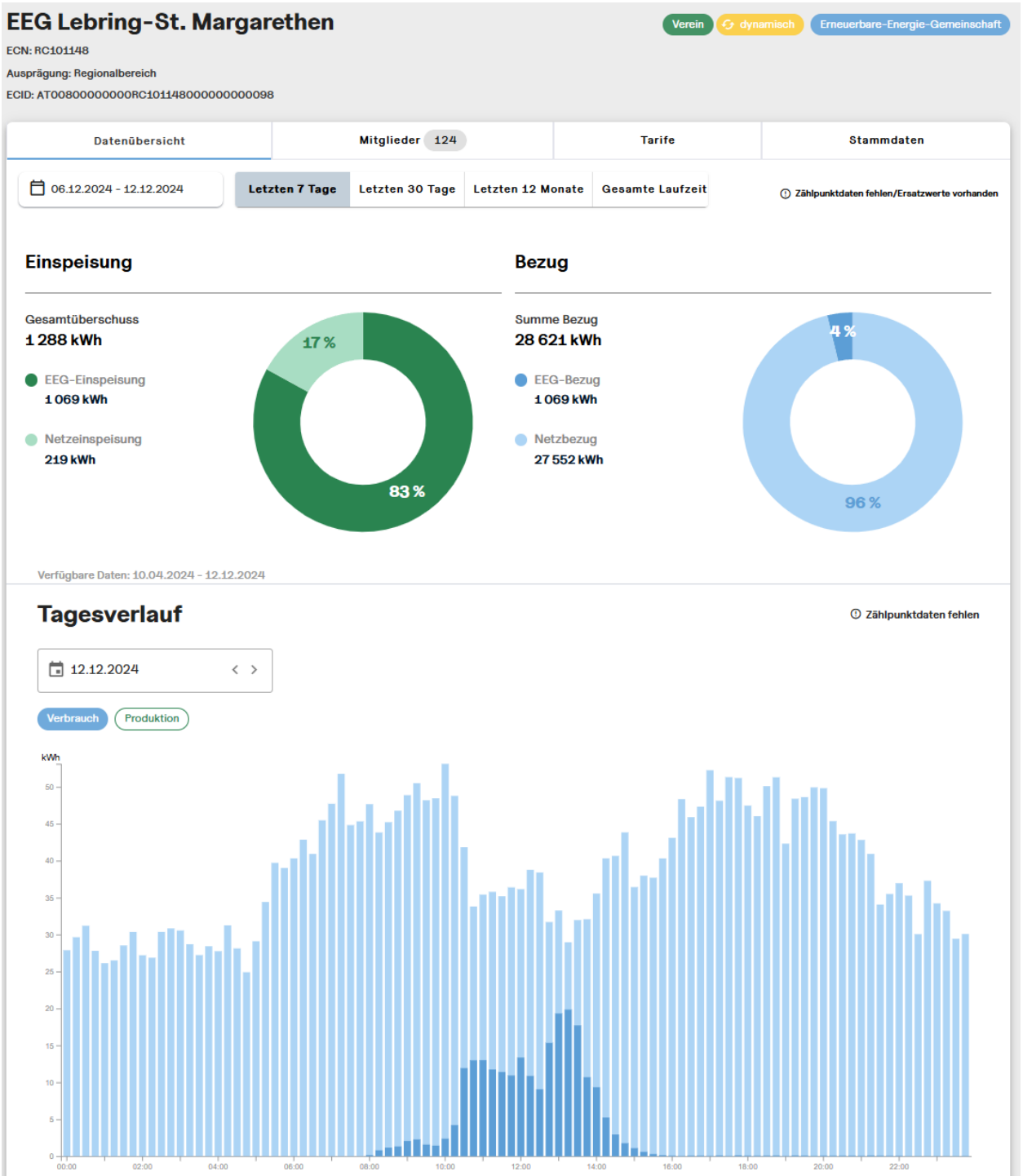
For the **EEG GU Süd eGen** the 6 municipalities themselves, with their diverse events and communication channels, are the nucleus. For example, the EEG was presented by Mayor Robert Tulnik and Heribert Strasser from So-Strom at the citizens' meeting of the municipality of Fernitz-Mellach on November 21, 20024 and the possible participation from the second quarter of 2025 was announced. A separate website will also be developed for this energy community in parallel.

2.2 Complementing activities

These two energy communities can serve as examples in which one can analyze the criteria for the successful development of a community. Both energy communities, EEG Hengist+ and EEG GU Süd eGen, manage community building on their own. They have a strong structure and are firmly anchored in the local and regional population. There is always a need for a local team as the driving force that drives the issue forward, as well as a "face" to the community that builds trust among the population. In the case of EEG Hengist+, this is Stefan Sturm, who is doing consistent development work and investing a lot of free time in the project. For example, the logo of the EEG Hengist+ emerged from a competition at the New Middle School. The children worked enthusiastically and passed the topic on to their parents. This is how bottom-up communication works, from the children through the parents to the whole community.

At EEG GU Süd, it is the mayors who are driving the project forward.

Other criteria for success are the professional support from outside. So-Strom provides support with the technical, organisational and content-related issues of the EEG. This is day-to-day work is important to build up trust. The So-Strom platform is a crucial factor. Every member sees the energy quantities of the entire community, as well as their own. This makes self-efficacy visible.



The energy community in Lebring- St. Margarethen addresses the residents of the municipality. The Energy4all project can help to raise awareness of the energy transition and the importance of a decentralized (renewable) energy supply among the population. Children in particular can serve as disseminators of knowledge within families. In order to create awareness, the research project can conduct interactive workshops in the community. The “energy transition game” can be used here. In addition to the workshops, an online questionnaire can be used to survey the readiness of the population to participate in energy communities.

In the Graz-Umgebung-Süd region, the Energy4all project can further educate representatives of the municipalities in local workshops. In the workshops, scenarios can be created that clarify the goals of the municipalities and forecast developments that are not desirable. The central questions are: Where do we stand? Where do we want to go? This can be reinforced by anchoring

the goals spatially. The region is currently being set up within the municipalities; other areas will be included in the future. This means that it is not yet time for the public to be involved. However, scenarios can be developed with representatives of the municipalities. In the future, in addition to the workshops, an online questionnaire can be used to survey the readiness of the population to participate in energy communities.

3 Challenges, difficulties and gaps

There is a high level of coordination in the region GU-Süd, as different policy makers with different political interests have to be involved, which increases the time needed. A significant challenge lies in integrating municipal administrations, as they play a crucial role in fulfilling specific tasks and are key stakeholders in ensuring the seamless operation of the energy community. While many municipalities are well-equipped to independently organize the participation of citizens and businesses, it remains uncertain how readily they will embrace external support.

The next challenge for Lebring-St. Margarethen revolves around value-added tax (VAT) issues, which may arise due to potential changes in regulations prompted by increased sales within the energy community.

Possible challenges outside the project's control could be changes in the energy market and in the grid charges.

4 Further directions and actions

Looking ahead, the project team is now focused on developing a concept for a children's workshop in Lebring- St. Margarethen, designed to inspire active participation and foster knowledge about energy transition among young residents. In the coming weeks, the Austrian team will meet with the chairman of the energy community to finalize the workshop's logistics and refine the strategy. The workshop is scheduled to take place in the spring, offering children an approach to learn about energy transition. With these steps, we aim to build lasting relationships within the community, inspire the next generation to take an active role in shaping its future and disseminate the knowledge into families.

Next steps in the region GU-Süd include re-establishing contact with the municipal representatives, participating in an upcoming public event for local residents, and organizing and preparing a workshop with key municipal leaders.

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6 Figures and Tables