

Press Release

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EU TREND: JOINT ENERGY GENERATION ON THE RISE

AIT study shows Europe's model energy communities: Viennese research project Viertel Zwei at the forefront - EAEC must create framework for putting it into practice

Private households will play an important role in our energy system in the future. Participants in renewable energy communities produce, use, and share electricity and heat independently and locally. A recent study by the AIT Austrian Institutes of Technology on behalf of Wien Energie shows that energy communities are on the rise throughout Europe. Almost 80 projects were identified in this thematic area and seven important projects from Portugal, Germany, Austria, Switzerland, and the Netherlands were selected for an in-depth qualitative study. It turns out that the framework conditions and prerequisites are very different. What all projects have in common is that they aim at efficient energy use, climate protection and community building. In Austria, the legal framework for energy communities is to be created with the Renewable Expansion Act (EAG) at the beginning of 2021.

Energy communities "need a driving force"

"The active participation of households in the local energy supply requires both the commitment of the population, but also an optimised technical implementation. The challenge is to keep generation, distribution, storage and supply in an optimised balance at the local level. Our research projects are investigating various approaches to this, such as the use of blockchain technologies, local storage, or automatic control systems. If set up correctly, energy communities can help to promote the regional production and use of renewable energies through the active participation of citizens," says Dr Wolfgang Hribernik, Head of Center for Energy at AIT.

"The participation of the population in the energy transition is no longer a marginal phenomenon, but a field of development throughout Europe. In our study we analysed projects from all over Europe. It shows that renewable energy communities are practicable. However, obstacles can be the legal and organisational framework or high initial investment costs. Therefore, a driving force is needed for energy communities to succeed," says Hans-Martin Neumann, author of the AIT study.

Energy communities are an important lever for the energy transition to succeed. In this way, each individual can contribute to climate protection. Wien Energie already took the first steps in this direction three years ago with the Urban Pioneers Community in Viertel Zwei and is now one of the pioneers in Europe," says Wien Energie Managing Director Michael Strebl. "When the Renewable Energy Act comes into force next year, we will be ready as a partner to implement it in practice! We can be that motivator!"

Success factors: How the implementation can succeed

Based on the analyses, the study names four steps to be able to implement energy communities on a broad scale:

- Early involvement of participants and continuous communication,
- Simple organisational framework without bureaucratic obstacles,
- subsidies as start-up financing for the expansion of renewable energy systems, and
- integration into long-term urban and neighbourhood planning.

It is important to intensively involve the potential participants already in the start-up phase and to have a central contact point. In order to ensure a coordinated approach, a "caretaker" is needed who is involved from the beginning, coordinates the steps, and mobilises potential participants actively and, above all, on an ongoing basis. Also essential is the free choice of the organisational and legal form as well as voluntariness and freedom of choice of the members and operators.

"Helping people to help themselves is our motto when it comes to energy communities. With our many years of know-how in the energy sector, we will in future support the establishment of energy communities, the construction and operation of renewable plants and offer a digital platform for communication and exchange. The energy production and supply lie in the community," Strebl explains the future possible role of energy suppliers (EVUs). Contracting models should also be possible in order to avoid investment costs for new renewable plants on the part of energy communities and thus a major start-up hurdle.

Climate protection and innovation motivate participation

Only a few participants mention the fact that energy communities can also lead to savings in their wallets as a motivating factor. As long as there are no disadvantages compared to conventional energy supply, costs are not decisive. The main reasons cited are environmental protection, sustainability, a desire for innovation and an affinity for technology. Digital platforms and apps that display the energy flow are well received. The community experience is mentioned as a nice additional feature. However, active communication within the participants was observed less often.

Success stands and falls with new regulations in the EAEC

"In Viertel Zwei we did many things right and can now use these experiences for implementation in practice. However, it is also clear that the success of energy communities stands and falls with the upcoming regulations in the Renewable Energy Sources Act. Only if energy supply companies are able to act as service providers for energy communities will energy communities establish themselves nationwide," Strebl emphasises. Until the EAG comes into force, the research project in Viertel Zwei will continue. The first trading phase among the residents has just been completed and will now be analysed in detail in the coming weeks. In parallel, the project will be opened up further. "In the next step, we will go beyond the boundaries of Viertel Zwei and include additional renewable generation plants, participants with their own photovoltaic systems on their single-family homes and even commercial customers. Our next project is an energy marketplace," says Strebl.

About the study

For the study, the AIT systematically recorded almost 80 existing European projects in the field of energy communities and plus-energy districts. The projects were classified according to selected criteria such as the size of the city and the area, new construction or renovation of existing buildings, status of implementation, energy concept and innovative aspects (energy technologies, processes, business models). In the second step, seven important projects were selected for an in-depth analysis and guided expert interviews were conducted with project managers and project staff on the following topics: Organisation, Smart Energy Supply, Infrastructure & Facilities, Community Management.

Download the complete study:

<https://positionen.wienenergie.at/beitraege/energiegemeinschaften-studie>

Images and infographics:

<http://mediathek.wienerstadtwerke.at/pinaccess/showpin.do?pinCode=iz7qwZHjYIZk>

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