Resilient

Prosperous

Bioenergy Villages in the region of Göttingen, Germany

SUMMARY

A bioenergy village is a model that uses renewable energy sources in rural areas, such as biomass from agriculture and forestry, in a biogas power plant that supplies energy to the village. A pioneering example is the village of Jühnde, in the German region of Göttingen. The initiative dating from 2005 has been scaled up to other villages in the area thanks to different European, national and regional funding sources. Reiffenhausen, Wollbrandshausen and Krebeck are three other bioenergy villages that have replicated this concept. More than 50% of the households of those three villages receive heat exclusively from the bioenergy plant. All heat consumers are members of the cooperatives and the electricity generated is fed into the public grid. Millions of tons of CO2 have been saved every year since then. In the current situation of energy crisis and climate change, bioenergy villages show the added value of investing in renewable energy projects that are sustainable and allow energy independence.

CONTEXT

The first bioenergy village was created in Jühnde thanks to the joint efforts of the regional municipality, the Göttinger Land Local Action Group (LAG) and the International Centre for Sustainable Development (IZNE). With the idea of replicating this innovative model in other municipalities, the actors who started the first bioenergy village came together to develop a LEADER project to scale it up. The project began with an information campaign and a contest for interested villages. From more than 30 applications, **10 villages were selected** based on some prerequisites (village participation, farmer commitment, etc.). These villages were intensively consulted to carry out eight feasibility studies. A new LEADER project allowed another four studies for other territories. Two of those four villages decided to unite in a Wollbrandshausen-Krebeck cooperative and build a joint plant. This practice presents the activities and results achieved by the initial project and also the examples of the bioenergy villages of Reiffenhausen and Wollbrandshausen-Krebeck.

Themes: Energy, climate, nature and environment, bioeconomy and circular economy. **Rural revitalisation**

Country: Germany

Organisations: The municipality of Goettingen (public authority), the International Centre for Sustainable Development (research institute) the cooperatives of the bioenergy villages Wollbrandshausen-Krebeck eG and Bioenergiedorf Reiffenhausen eG

Start & end date: 2005 - Ongoing

Budget: an estimated budget of 1 300 000 E U R

Funding sources: Feasibility studies: EU LEADER programming periods 2000-2006 and 2007-2013 and local government budget

Website: FNR - Bioenergiedörfer: Bioenergiedörfer

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OBJECTIVES

The objective of the Bioenergy Villages project is to create, in different rural areas where a feasibility study was conducted, a power plant that produces renewable energy based on biomass. This energy reduces CO2 emissions for heating, electricity consumption and the use of artificial fertiliser by circular use of nutrients, improving soil health. The bioenergy village model also aims to empower communities to participate through a cooperative that can create new job opportunities, tackle environmental challenges through citizen participation and promote a more conscious use of resources.

ACTIVITIES, KEY ACTORS, AND TIMELINE

Following the proven success of the first pilot project in the village of Jühnde, the LAG Göttinger Land, the district of Göttingen and the IZNE developed a LEADER project to promote the idea and help other villages to follow the path of Jühnde. The project started with an information campaign that collected more than 30 expressions of interest from different villages. Field visits, surveys and meetings were organised to analyse the conditions.

During the planning phases, aspects such as the heat consumption of the village homes, the interest of the inhabitants in the model and the estimation of the investment costs to develop it were part of the feasibility studies. A price for the biomass was agreed with local farmers and a business plan was developed for each village, including the creation of a cooperative to run the project. The two villages of Wollbrandshausen and Krebeck were a particular case because they decided to cooperate and start a joint biogas plant and a cooperative co-owned by the two villages.

RESULTS

The Bioenergy Villages project, in its different funding phases, has allowed the development of 12 new power plants in the region of Göttingen Some of these have now been running for over a decade and have brought long-term price stability and better use of arable land and machinery. It has also meant a **significant reduction of CO2 emissions, soil erosion, pesticides and dependency on fossil fuels**. For regional development, the bioenergy villages have encouraged villagers to be active members of the cooperatives and increased the income diversity in those rural areas.

SUCCESS FACTORS/LESSONS LEARNT

The idea of a bioenergy village is based on a common heat supply of the village. A commitment of at least 50% of homeowners is crucial to make the investment in the heat grid economic. Therefore, it was very important to inform the inhabitants of the villages properly about the benefits and how they could become co-owners of the project by joining the cooperative. Management of the project application, loan negotiations, procurement rules and contracts with companies were some of the challenges the project promoters had to tackle to make the bioenergy villages a reality.

Close cooperation among actors from different sectors (municipality, LAG, research centre, farmers) actively supported by interdisciplinary experts (sociologists, psychologists, agricultural scientists, geographers, engineers) was essential. Political support, including early state funding to carry out the feasibility studies and give a reliable basis for investment decisions, was also key to showing how the model could work and its added value.