



Resilient



Prosperous

# Bioenergy Villages in the region of Göttingen Germany



## SUMMARY :

A bioenergy village uses renewable sources like biomass to supply energy to rural areas. Jühnde, a pioneering village in Germany, serves as an example. Since 2005, with support from various funding sources, the initiative has expanded to neighboring villages like Reiffenhausen, Wollbrandshausen, and Krebeck. Over 50% of households in these villages rely solely on the bioenergy plant for heat. Members of cooperatives benefit from the heat, while excess electricity is fed into the grid. This model has resulted in significant annual CO2 reductions. Bioenergy villages demonstrate the value of sustainable investments in renewable energy, fostering energy independence, especially in the face of energy crises and climate change.



## 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.

## 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.

**THEME(S):** Energy, climate, nature and environment, bioeconomy and circular economy, **rural revitalisation**

**COUNTRY(IES):** Germany

**ORGANISATION(S):** 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 - present

**BUDGET:** 102,255 €

**FUNDING SOURCES:**  
**Feasibility studies:** EU LEADER (2000-2006 ; 2007-2013) , local government budget  
**Implementation of the model:** German Federal Government and federal states and EU LEADER (2007-2013) and local government budget

**WEBSITE:** <https://bioenergiedorf.fnr.de/>





## 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.



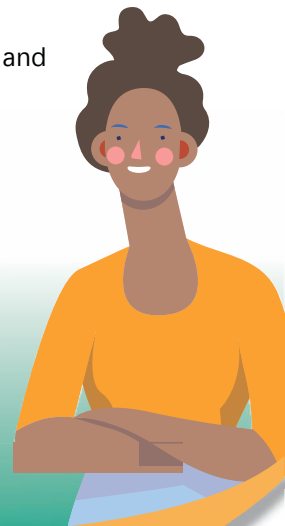
## RESULTS

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 CO<sub>2</sub> 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.



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