

Energy self-sufficient Commune of Kisielice

Summary

Promoting energy self-sufficiency in Poland's rural communities

Diversifying energy sources and maximizing local resources to create energy independence

The energy self-sufficiency project of the Commune of Kisielice in Poland is designed to increase energy independence, make best use of local capacity and reduce CO₂ emissions in a small rural commune. The commune has set itself the goal of abandoning dependence on coal – reducing emissions, improving air quality and making maximum use of local agricultural production capacity.

‘Our commune is one of the first places in Poland where wind farms, biomass boiler plants and biogas plants were built, making Kisielice commune one of the leaders in investment diversity in renewable sources of energy in the country. Our goal is to achieve energy independence’, says Marcin Duda, Project Coordinator.



The aim of the project is to inform the citizens of the positive effects of greener energy sources and to encourage foreign investors to fund the construction of wind farms in uninhabited rural areas. The funds raised from this initiative are being used to build communal installations using Renewable Energy Sources (RES) and fed by residues from local agriculture.

The Commune of Kisielice has 2300 inhabitants and covers 17 280 hectares (ha). Most of the land is farmland and is indicative of a typical agricultural community. The Commune now has two wind farms with 48 wind turbines and a capacity of 82 megawatt (MW), which have been complemented by a modernisation of transport infrastructure and connections. A third wind farm with a capacity of 24 MW is under construction.

A central heating network has been implemented in Kisielice, financed with grants and tax revenues. It is fed by a biomass boiler house, which has the capacity of 6 MW and supplies 85% of the buildings. In December 2013, construction of the first biogas power plant in the municipality was completed. Located near the existing ecological heating installation, the plant produces 1 MW of heat and 1 MW of electricity and is driven by silage corn from the fields.

Kisielice has built a modern heating network fed by the communal straw-fired boiler house with a capacity of 6 MW. Some 250 buildings (85% of the total) are now connected serving more than 90% of the population. Its waste heat will supply the village with hot water during the summer months.

The commune has also modernised their street lighting, resulting in a significant reduction in electricity consumption.

Given the social resistance to the construction of wind farms from the ecology movement, the Kisielice commune put an enormous effort into convincing the community to take an interest in renewable energy issues. Farmers, who have wind farms on their land receive about EUR 5 000 per year for the lease for each turbine. Cereal straw is also bought from local farmers, providing additional income for local citizens and lowering CO₂ emissions.

Between 2010 and 2012 the municipal authorities organised meetings with residents where they promoted micro RES projects such as heat pumps, solar, small wind turbines, etc. As a result, the commune founded an association of individuals interested in participating, together with the municipality, in projects of this type in the future.



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Also this year the municipality will announce a tender for the purchase and installation of photovoltaic panels for the first photovoltaic farm in the region. In addition, the municipality will install three sets of photovoltaic panels with a capacity of 10 kW each for public buildings.

For more information: <http://www.kisielice.pl>

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