

CASE STUDY



Reaching independence from fossil fuels

Kielice combined leadership and participatory efforts to become the first self-sufficient community in Poland!

"RES investment is important for rural areas. It allows operating costs to be reduced, provides additional income and impacts positively on the quality of life"
Tomasz Koprowiak, former Mayor of Kielice

The Summary

After setting the target for becoming Poland's first self-sufficient community, Kielice now generates more electricity than it needs and has reached its objective.

The Context

Kielice is a small city in the north of Poland in the province of Warmia-Mazury with some 6 000 inhabitants. Located in the south of the Dolne Powiśle region, the semi-rural municipality has put itself on the global map of pioneers of the renewable energy transition, in contrast to Poland's enormous national dependency on lignite and hard coal. Next to the industrial sector and the service sector, agriculture is the third most important activity in Poland, contributing 3.8% to the National GDP. Poland's two million private farms cover 90 % of all farmland with most farms of an average size of 8 hectares. Kielice decided

to make the most out of the available land and invested in renewables while stimulating the local economy.

The Challenges

Kielice decided to make itself independent from the combustion of fossil fuels and invested in two windfarms and additional renewable energy capacities back in the late 1990s. The main motivation for the municipality was the stimulation of the local economy. In order to pave the way for this transition, Kielice had to change its Spatial Development Plan in 1998 to ensure that the construction of wind turbines was not conflicting with existing regulations. Since Poland had almost no experience with emerging renewable energy installations, it required a number of legislative updates.

Also, when trying to get the permission from the Regional Directorate for Environmental Protection to use waste from the food industry for the purpose of electricity generation, the city was not successful. However, thanks to the persistence of the mayor, the permits were eventually granted and a biogas plant was built in 2014.



Credits: Przemysław Jahr, [Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Kielice_Powiat_Kielce_Poland.jpg)



The Model

The municipality conducted a number of research about expected wind capacity, technical challenges and economic results before installations started, which was a prerequisite for successfully attracting investors and ensuring support of the local population.

The municipal authorities addressed all the concerns of the local community through transparent consultations. A number of different participation efforts were undertaken, such as the organisation of study visits for community leaders and project presentations open to all the population. Additionally, the profit sharing mechanism had a major role in ensuring the acceptance of the installation of wind turbines among the local farmers. Ultimately, the vast majority of residents of Kisielice supported the plan.

The People Behind

The political leadership of Tomasz Koprowiak, who was the Mayor in the years 1990-2014 can be considered as one of the most relevant success factors. In order to move forward in Kisielice's strategy, the mayor had to closely monitor the implementation and ensure the support of the local residents. Koprowiak's leadership was fundamental when the city planned to generate renewable electricity from agricultural and food waste.

The Clients

The activities implemented in the framework of the self-sufficiency plan were implemented in view of benefiting the local community: less pollution, access to better services and infrastructures are among the main benefits of this project.

Being a rural community, local farmers were the main stakeholders considered by the municipality. Thanks to the project they can get an extra income of about EUR 5 000 per year for the lease of each wind turbine on their land.

The Money

Before the start of the project, the city was in a difficult economic situation. That is the main reason why the mayor decided to invest in RES. Shortly after, wind energy investors came by. The taxes paid by these investors amount to a significant revenue for Kisielice authority and the municipal budget. They provided the capital for the investment into the CHP plant.

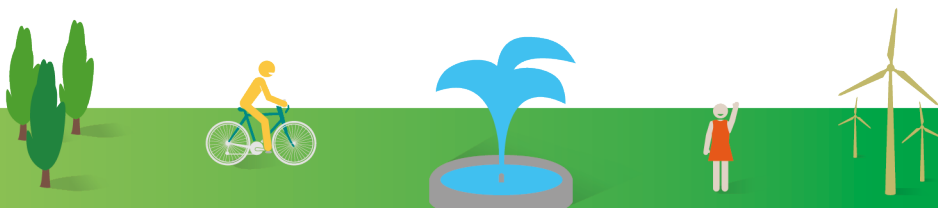
"The revenues coming from the wind turbines were used as a guarantee for bank loans to modernise local infrastructure" Tomasz Koprowiak, former Mayor of Kisielice

The Replication Potential

The example of Kisielice is particularly relevant for rural cities and villages. Farmers can benefit largely from investing into renewable energy facilities – be it by co-owning windfarms, generating energy from biomass or by simply converting their fields or roof tops into additional revenues by renting them to investors into RES. In addition, it demonstrates how clear targets, a careful monitoring and the involvement of stakeholders are key to the success of RES projects.



Credits: www.wrota.warmia.mazury.pl



The Impact

Today, there are in total three wind farms with a combined installed capacity of some 120 MW. In addition, a biomass-based Combined Heat and Power (CHP) plant was built in 2014. The plant consists of two straw boilers of 6 MW combined with burning cereal straws – again purchased from local farmers. It is connected to a district heating system, which provides heating to 250 buildings, i.e. serving more than 90 % of the local population.

The development of RES in Kisielice has also led to investments into the local infrastructure with the modernisation of municipal roads or newly built power grid connections financed by the investors of the wind farms. This proves that investments into RES on the local level can pay off.

In 2014 Kisielice received the ManagEnergy Award for its leadership on the energy transition. Today it is 100 % powered by renewable energy.

The Figures

- ✓ **120 MW** installed capacity of the 3 wind farms
- ✓ **6 MW** capacity of the 2 straw boilers
- ✓ **250** buildings whose energy needs are covered by renewable sources
- ✓ **5 000 EUR** extra monthly revenues for the farmers involved



Credits: European Commission

Contact:

Powiślańska Regionalna Agencja Zarządzania Energią

Phone: (55) 279 70 79

Email praze@praze.pl

