

The use of renewable energy to improve air quality

EAFRD-funded projects

POLAND

ifelong learning & vocational training

Location Poznań

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Priority

P1 – Knowledge transfer & Innovation

Measure

M01 - Knowledge transfer & information actions

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Project duration

2019 - 2019

Project promoter

Agricultural Advisory Centre in Brwinów, Poznan Branch Office

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Website

www.cdr.gov.pl/aktualnosci/57-cdrinformuje/3123-odnawialne-zrodlaenergii-oze-szansa-na-poprawe-jakoscipowietrza-material-informacyjnopromocyjny?highlight=WyJvemUiXQ==

ENRD Contact Point

Rue de la Loi, 38 Boîte n.4 - 1040 Brussels, Belgium Tel. +32 2 801 38 00 email: info@enrd.eu website: http://enrd.ec.europa.eu/ A project that promotes the use of renewable energy to improve air quality through training and awareness raising.

Summary

A significant problem occurring in Poland in recent years is the high level of air pollution by very small particles, known as PM10¹ and PM2.5² particles, especially in the winter. For this reason, it was necessary to find ways to raise awareness among citizens and professionals about renewable energy applications and air quality.



Agricultural Advisory (oznan Branch Office

The project received funds from the Technical Assistance measure of the RDP which were used to produce a Renewable Energy Guide for an Advisor, known as a 'RES guide' and organise training and study trips. These activities facilitated the transfer of knowledge to participants on air quality improvement and the application of renewable energy technologies in businesses and municipal enterprises. The project also organised an online RES scientific competition for agricultural / forestry school students from the Greater Poland Voivodeship³ (Wielkopolska).

Results

A group of 20 people were trained in renewable energy sources. One thousand copies of a guide on renewable energy were issued and distributed and a competition was held between 28 agricultural and forestry school students.

The main benefit of the project was that it increased the knowledge and raised awareness among the inhabitants of Greater Poland about the use of renewable energy sources in the context of improving air quality.

It also provided participants with practical skills on how to use energy optimisation tools in a building.

- ¹ Particles such as dust, pollen or mould, under 10 microns in diameter
- ² Particles such as combustion particles, organic compounds, metals etc, under 2.5 microns in diameter
- ³ The highest-level administrative subdivision of Poland, corresponding to a "province" in many other countries.



European Network for Rural Development

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Context

A significant problem occurring in Poland in recent years, is the high level of air pollution by PM10 and PM2.5 particles, especially in the winter. For this reason, it was necessary to find ways to raise awareness about investing in renewable energy and the use of materials in the construction of buildings that prevent heat from escaping.

Objectives

The project aimed to raise awareness among the inhabitants of Wielkopolska (west-central Poland) about climate change mitigation actions based on the possibilities offered by using renewable energy.

Emphasis was given on educating high school students on the need to improve air quality using renewable energy. How it can be used by businesses, in municipal investments and construction projects, as well as for transportation in rural areas, was also an aim.

Activities

A training was organised for 20 representatives from different institutions interested in the topic, including agricultural advisors, representatives of local governments, local action groups and farmers. The training program covered subjects like: 'Energy-saving construction - the use of renewable energy in the optimisation of energy costs'; 'Development of renewable energy sources in Wielkopolska'; 'Actions and programmes supporting air protection in Wielkopolska'; and 'Investment aspects for prosumers⁴ and small energy producers'.

As part of the training, instructions were given on how to use the pyrometer, which is a device for non-contact temperature measurement. Participants received a device that they can use in their work to measure the temperature on window openings, doors and other parts of buildings to determine the places which act as thermal bridges. This will allow them to quickly assess whether a building needs thermal insulation improvements. The devise will also enable them to check the insulation performance achieved after any improvements are made.

A study trip was organised for a group of 20 people to the Lublin Province. The Lublin region is one of the national leaders in the fight against poor air quality and the region that has used EU funds most effectively for this purpose. Participants visited, among others, an agricultural biogas plant in Zaścianek, an innovative tower biogas plant

adapted for the utilisation of food products in Siedliszczki, and an innovative 2 megawatt (MW) solar farm in Korolówka.

The project published the 'Renewable energy guide for an advisor'. The publication presents a selection of renewable energy sources, such as photovoltaic panels, solar collectors, wind power plants and heat pumps. It also describes provisions regarding the construction of renewable energy sources in rural areas; includes an overview of the energy market in Poland; analyses methods of optimising / rationalising energy costs on a farm; and energy tariffs. One thousand copies of the guide were published and forwarded to institutions whose representatives took part in a study trip.

An online competition called 'Renewable energy for clean air' was held amongst 28 students from agricultural and forestry schools. The competition consisted of 18 closed and two open questions and based on the responses, a maximum of 24 points could be obtained. The Golęcin Poznań Nature School Complex won the competition and was award with a 'Clean energy' educational kit. The kit enabled them to experiment with solar, wind and fuel cells (hydrogen technology). It also contained software that allows simulations of different power variants and loads and computer processing of experimental results. In addition, 10 runners-up were recognised and received a pyrometer each.

The project was implemented in cooperation with NRN partners, namely, the Wielkopolska Agricultural Advisory Centre in Poznań, the Agricultural and Forestry Education Association EUROPEA Polska and the Lublin Agricultural Advisory Centre in Końskowola. The project team also cooperated with the Marshal's Office of Wielkopolska Province, the Provincial Fund for Environmental Protection and consultancy companies working on renewable energy.

Main results

A group of 20 people were trained in renewable energy sources. One thousand copies of a guide on renewable energy were issued and distributed and a competition was held between 28 agricultural and forestry school students.

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⁴ individuals who consume and produce value, either for self-consumption or consumption by others, and can receive implicit or explicit incentives from organisations involved in the exchange.