



POLSKIE I NORWESKIE GMINY
razem dla klimatu i energii

Pałecznica

Smart house in the smart village

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Description of the municipality

Pałecznicza is a small municipality located in the southern part of Poland, in the Małopolskie Voivodeship. The municipality has over 3 700 inhabitants and is implementing wide-spread sustainable development strategy. Within this long-term strategy Pałecznicza is implementing many environmental projects and activities, including installation of PV modules on public buildings, supporting replacement of old and inefficient boilers and supporting construction of small wastewater treatment installations in individual buildings. The municipality also developed and adopted so called Low-Emission Development Programme and participated in the IEE GREEN TWINNING project (full title: Capacity building and lessons to be learned for the institutionalisation of sustainable energy policies in the municipalities' operations) supporting European exchange of experience in the area of EE and RES use.

WWW: <http://palecznica.pl/>

Description of the overall idea for innovation

Identified problem: increasing energy consumption resulting in increasing energy costs and CO₂ emissions (due to the growing number of citizens and businesses operating locally), increasing production of sewage and pollution of water intakes and the main groundwater reservoir „Niecka Miechowska” ("Miechów Basin"). Currently, 100% of the municipality is connected to the water supply network, while only 2 out of 14 villages of the municipality are connected to the sewerage system. This, as well as the relatively low environmental and energy awareness of the citizens, leads to the excessive and uncontrolled consumption of resources and thus to significant network losses. Main objective of the innovative project: using Norwegian experience and know-how to implement innovative system for monitoring and management of energy and water consumption, based on the GPRS technology. Operation of the system will consist in the remote reading of the resources consumption in real time, which will be possible due to the installation of SMART energy meters and water meters (with GSM communication), as well as installation of CO₂-emission meter on the chimney. The data collected will be transferred to the central recorder, which will further transfer them to the platform with tools enabling research, analysis, control and reporting activities. This solution will allow for constant monitoring of the current consumption of electricity, water and CO₂ emissions - both using a web browser or via special application, which may be installed on the mobile phones using IOS, Android or Windows Phone systems. Planned monitoring and management system will contribute to the rationalisation of resources consumption by adapting this consumption to the real needs of the end users. As a result, also CO₂ emissions will be reduced.

Description of the micro-project

Monitoring systems using remote meter reading are slowly becoming an European standard. In Norway such solutions are pretty common, while in Poland they are still a novelty. Implementation of the pilot project will make Pałecznicza the first municipality in Poland with full energy and water consumption monitoring based on the GPRS technology. The micro-project

consists in the exchange of experience with the Norwegian partner aiming at getting acquainted with the Norwegian best practices and implementation technologies in the area of energy efficiency in a rural municipality. On the basis of this exchange the municipality will be able to verify preliminary assumptions of its pilot project and to choose optimal solution. Citizens' direct meetings with the representatives of the Norwegian partner will increase their interest and engagement in more efficient use of resources in their everyday routines. During these meetings the participants will learn more about:

- energy and water consumption monitoring technology and the methodology for using monitoring data to improve energy efficiency;
- real financial savings that each household can obtain as a result of the pilot project.

Within the framework of the micro-project the municipality will also develop a feasibility study for the planned monitoring and management system, together with the financial and economic analysis. The documents are necessary to apply for co-financing from the Regional Operational Programme for the Małopolskie Voivodeship or from the Norwegian Financial Mechanism. The project will also contribute to the increase of environmental awareness of Pałecznicza's citizens and local stakeholders.

Planned results/outputs of the micro-project

- organisation of two 3-day study visits in Norway (for the 2 representatives of the Pałecznicza municipality);
- organisation of two 3-day visits in Poland (for the 2 representatives of the Norwegian partner);
- organisation of the conference presenting the results of the micro-project and disseminating the overall pilot project concept (Smart house in the smart village). The conference will be attended by the representatives of the Norwegian partner, regional and subregional authorities, institutions/organisations active in the field of environmental protection and companies offering innovative EE solutions;
- organisation of the meetings with the representatives of 14 villages being part of the municipality and with other relevant local stakeholders - 5 meetings x 50 participants;
- development of the feasibility study for the planned system for monitoring and management of energy and water consumption on the territory of Pałecznicza;
- preparation, printing and dissemination of the promotional material.

Expected role of the Norwegian

The municipality is willing to use Norwegian partner's experience and knowledge concerning implementation of similar activities. This will help them to verify assumptions of their project and minimize associated risks. Pałecznicza is also looking for support in sharing information with the citizens and engaging them in project implementation in order to facilitate future environmental investments.

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