



BOOSTEE-CE PILOT ACTION PA5-POLAND

Interreg 
CENTRAL EUROPE European Union
European Regional
Development Fund

BOOSTEE-CE





Introduction

The BOOSTEE-CE (*Boosting Energy Efficiency in Central European Cities through Smart Energy Management*) project will develop and implement technical solutions, strategies, management approaches & financing schemes to achieve higher Energy Efficiency (EE) in public buildings. This will be achieved through a transnational cooperation and using geospatial data, smart energy management tools and energy audit to facilitate the implementation of EE buildings. The final aim is to improve the governance of EE in existing public buildings (within Pilot Actions) and ultimately reduce energy consumption.

Aims

The pilot action to improve energy efficiency is implemented in the **Primary School No. 1 in Plonsk** with an area of 2 155,25 m², volume of 15 760 m³. The school is a four-story building (basement, 2 floors and attic). The building is used by 416 people. The building was built in 1905. City Municipality of Płońsk is the owner of the building and will retain ownership and management responsibilities after the project lifetime. The energy class of the building has been identified as B - average annual consumption of energy needed for heating is 229 996 kWh. The building is heating by gas boiler which is in good condition, but the overall condition of the building is poor. The annual electricity consumption is 26 667 kWh.



The following objectives have been agreed as part of the pilot:

- improvement of energy monitoring
- modernization and control lighting system
- increasing the comfort of the building use
- easier operation of the building
- promoting and disseminating knowledge about energy efficiency measures in building

Solutions

The pilot action includes an investment in a **demonstration installation consisting of the use of LED lighting and smart metering** in two classrooms and two toilets, implementation the **3D Energy Management System** as a part of OnePlace platform. The equipment installed includes **four LED lamps 56W, three LED lamps 12W, four electricity meters LE-01M MID and two converters.**



PA idea (MONITOR -> CONTROL -> MANAGE -> SAVE)

The implementation of the energy consumption **monitoring and management** system contributes to a significant reduction in the value of energy bills. The data collected by the system, which constantly **controls** the level of energy consumption, allow to optimize the level of contracted capacity, which in turn generates **annual savings**. The system constantly monitors the level of energy consumption, provides information about where it is distributed, where it is lost. The tools provided by the system allow to easily analyze this data and draw conclusions about ways to reduce the costs associated with the use of energy. **Energy management** allows to optimize the contracted capacity, selection of a cost-effective tariff, energy monitoring and provides knowledge about energy flows in the building.



Reduction of CO₂ emission,
improvement of air quality



Reduction of energy
consumption



Optimization of costs
(financial savings)



Increasing the comfort
of the building use

PA indicators & results

- investment period **29.06-5.09.2018**
- investment cost **16 639,55 €**
- **5 people** involved in PA implementation
- 1 tool / instrument used (**energy audit**)
- 2 trainings, meetings, seminars
- **1787,76 kWh** annual reduction of energy consumption
- **241,10 €** annual cost savings
- **1,39 tons** annual reduction of CO₂ emission
- change in people's behavior by raising awareness

Added values for replication and dissemination

The activities can be transferable and replicated in other cases and regions. Information about the pilot action is promoted and disseminated in the region and beyond.


The solution can be replicated in the other three primary schools, which are similar in energy consumption habits and building parameters or can be extended to other rooms in the pilot building.

Contact

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