



BOOSTEE-CE PILOT ACTION PA4-HUNGARY

Interreg 
CENTRAL EUROPE European Union
European Regional
Development Fund

BOOSTEE-CE


TOLNA COUNTY
Development Agency
Norred11 Public Ltd



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 3 buildings: **Town Hall** with an area of 1 922 m², **'Lovarda' Cultural Center and Library of Tolna** with an area of 1 959 m², volume of 10 000 m³ and **Sport Center** with an area of 2 050 m², volume of 15 500 m³. The Town Hall and Cultural Center are a three-story buildings, while the Sport Center is a one-story building. The buildings were built in 1906, 1898 and 1983, respectively. The Town Hall building is used by 40 employees and 50 visitors per day, Cultural Center building has 8 employees and 50-800 visitors per day and Sport Center is used by 4 employees and 100-450 visitors. Municipality of Tolna is the owner of the buildings. The Town Hall building has been reconstructed in 2011. Its heating is provided by 2 gas condensation boilers and radiators. Lighting is provided by ordinary neon lights and E27 incandescent light bulbs. The Cultural Center system heating is provided by 2 gas boilers, hot domestic water is also produced by gas. At the hall, gas-fired overhead radiant tube heater provides the heat. Regarding the lighting, neon lights can be found at the offices, locker rooms, and also in the hall. At the hall also metal halide lamps are operating. The building was renovated in 2007. The Sport Center is heated by a 270 kW pellet boiler, a 110 kW gas boiler and a 90 kW gas boiler. The hall is equipped with neon lights and halogen reflectors, the sport field is equipped with halogen reflectors. LED lights (E27 bulbs, LED tube armatures) provide light at the corridors and locker rooms.



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

- detailed measurement of the energy flows in the building in order to reveal lavish usage, leakages, malfunctions and to be able to monitor the consumption of the building parts with different functions
- increasing the comfort of the building use
- easier operation of the building
- promoting and disseminating knowledge about energy efficiency measures in buildings

Solutions

The pilot action includes an investment in **smart meters installation** to measure real-time electricity and heat consumption and **energy monitoring system** for improving energy management. The **OnePlace platform** is used as implementation and monitoring tool. **Staff training** in energy efficiency is a complementary activity.

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 **10 months**
- investment cost **13 800 €**
- **4 people** involved in PA implementation
- 3 tools / instruments used (**smart meters, energy management system, OnePlace platform**)
- 1 training, meeting, seminar
- approx. **5-7% reduction** in energy consumption, which will reduce costs and CO₂ emissions
- 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.

Contact

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OnePlace  **Platform OnePlace website:** oneplace.fbk.eu/