

Drop by drop

Optimising the Częstochowa's resource flows thanks to an ESCO

A Covenant of Mayors 2016 Case Study

In a nutshell

The “Drop by Drop” programme oversees the installation of innovative fittings in public buildings, that reduce water and energy consumption for heating tap water. The programme is funded by an Energy Service Company (ESCO).



Background

Częstochowa is located in Southern Poland on the Warta River. It is an economic, cultural and administrative hub in the northern part of the Silesian Voivodeship. The city has been a Covenant signatory since 2012 and committed to a 20% CO₂-reduction on its territory through its Sustainable Energy Action Plan. The municipality's efforts regarding sustainable energy management date back to 2003, when the City Engineer's Office launched a broad-scale programme on energy efficiency, including the “Programme of Energy and Environmental Management in the public buildings in Częstochowa”. This programme resulted already in a reduction of 27% in fuel and electricity consumption, 38% in water consumption and 26% in CO₂ emissions between 2003 and 2013.



Modernised heat exchange system in a school of Częstochowa

The “Drop by Drop” programme

In 2012 Częstochowa launched the second phase of its zero-cost management activities and extended it to include the installation of innovative fittings offered by an Energy Service Company (ESCO) under a programme called “Drop by Drop”. The program aims to reduce water and energy consumption for heating tap water, based on individualised technical solutions for specific facilities (such as water aerators that decrease water consumption in sinks, kitchens and showers, or containers that diminish the volume of old-fashioned flushing reservoirs). The office opted for implementing the “Drop by Drop” programme in educational facilities that had the highest water consumption.

Częstochowa in numbers

Number of inhabitants: 235,798

CO₂ reduction target: 20% by 2020
(Baseline year 2005)

Number of Covenant of Mayors signatories
in Poland: 54

Financing the programme

Neither the municipality of Częstochowa nor any of the entities participating in the programme had to cover any initial costs. The company that installed the innovative fittings agreed to be paid from the savings made by the participants in the programme. The financial arrangements of the programme foresee 30% of the savings staying with the given educational facility and 70% going to the company to pay off modernisation costs. The payoff period varies from two months to one year depending on the building. Additionally, the innovative water supply fittings remain installed and continue to generate savings for the municipality. The programme generates reduction in three kinds of costs: water supply, tap water heating and wastewater discharge.

Other projects

EURONET 50/50 MAX – the main purpose of this project is to save energy within public buildings through the implementation of the 50/50 methodology that is used in 12 educational facilities in the city of Częstochowa.

MESHARTILITY – the main purpose of this project is to develop tools that facilitate the exchange of data on energy consumption between utilities and local authorities.

The City Engineer's Office has also engaged in comprehensive educational and promotional activities to promote eco-friendly behaviour, including awareness-raising campaigns, workshops and training courses. By partnering with the Energy Efficiency Foundation (based in Katowice), the office now runs a website ("Częstochowa – Energy and Environment") that provides up-to-date information on the city's energy activities and their results, thus ensuring transparency of information.

"Every municipality has the possibility to pursue its own energy and environmental policy, which includes ensuring the security of electricity and fuel supply to citizens, optimising individual energy service costs and improving the quality of the environment. For me, it is equally important to encourage citizens to engage in activities in their daily lives that prevent negative climate impacts."

Krzysztof Matyjaszczyk, Mayor of the City of Częstochowa



Project numbers

Programme duration: January-December 2013

in 21 educational entities:

reduction of **13,052 m³** in water consumption

reduction of **652 MWh** in energy consumption for heating water

reduction of **289 tonnes** in CO₂ emissions

Częstochowa's awards

1st Prize in the category "A city with county rights" in the 2012 Local Government Management Leader competition.

Distinction in the "City of opportunities – The Sustainable City" competition for consistent and innovative efforts to improve energy efficiency.

Distinction in the ECO-MIASTO competition for ecological architecture policy.

Recognition of the important role played in the field of sustainable development and respect towards the environment in the 2014 Eko-Inspiracja competition.

For more information on the project, please contact:
Bożena Herbuś, City Engineer - Częstochowa ul. Śląska 11/13
Tel. 34 370 76 88 - bherbus@czestochowa.um.gov.pl

More information: <http://www.czestochowa.pl>

Covenant of Mayors, press@eumayors.eu