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ku oszczędzamy w

"DROP TO DROP" WATER SAVING PROGRAMME

Sector: Public-private partnership

Timeframe: 2011 – present

Location: Warsaw



PROJECT BACKGROUND

The "Drop to drop" programme was developed to answer the need for actions improving water and energy efficiency in public utility buildings and at the same time increasing environmental responsibility of local societies. The project aimed at coming up with a solution that could be applied in nearly any building, without engaging building owner's funds. The capital employed by the investor would be returned from the savings achieved as a result of implemented measures, which should bring immediate economic, environmental and social benefits. Additionally, implementation of the programme would be possible without building's temporary shut-down or major technical interventions, which is a novelty for the building owner. The programme focuses on the reduction of warm usable water consumption as the cost of energy needed to heat the water is often the second biggest cost item related with building's operation (after the cost of heating the building).

The programme was developed by the team of the EFERGO company and enables improvement of energy efficiency, decrease of water consumption and wastewater production and reduction of carbon footprint of a public building.

PROJECT DESCRIPTION

The "Drop to drop" programme is a proprietary solution, which consists of few complementary stages

composing comprehensive approach to water saving.

The first step is the water audit - a service created specifically for the programme needs. It serves as a basis for qualifying the building to take part in the programme and for determination of the necessary parameters of economic and environmental results of the action. A water audit aims at the presentation of the current situation of a building in terms of water consumption, amount of energy needed to heat it, resulting CO₂ emissions and amount of generated wastewater. It also includes a simulation of the balance of utilities consumed after the intervention. The audit presents the cost side of the investment and provides a key set of information for both parties concluding an agreement. A precondition for joining the programme is a positive result of the audit, which should show satisfactory level of estimated savings. The audit consists of the site inspection, analysis of historical data concerning the building and its operation (provided by the owner), technical analysis of water consumption points, interview and in-depth analysis of the results. The audit needs to be paid for by the building owner only when he doesn't sign an agreement on the programme implementation afterwards. The amount depends on the size and purpose of the building and varies from 1 000 - 2 000 PLN net (approx. 230 - 460 EUR net). In case of building owners, who decide on joining the "Drop to drop" programme, costs of the audit are recovered from the savings achieved as a result of its implementation. Signing of a relevant contract is the second important step of the process.



The third step is the implementation of water-saving solutions, which are adapted to the building, its technical state and operating conditions. They aim at the achievement of both economic and environmental benefits. In each case proposed water- and energy-saving measures are tailor-made, using branded, good quality solutions and taking into consideration epidemiological safety requirements. Relevant programme documentation is completed. Among the proposed solutions there are the following: automated control of water flow, water aeration, removal of leakages and maintenance works. One of the examples of implemented actions is the modernisation of water use points in a Warsaw school, including installation of timed flow taps, tap aerators and flushes with automatic water dosing. Another type of activity was the division of gastronomic units into different zones, including zone for washing the dishes and zone for water intake, where the water flow was adapted to the actual needs. Water consumption for social uses (showers) was reduced thanks to the installation of certified, water-saving shower heads and automatic timers.

The next step is ensuring adequate information and communication using common visual elements characteristic for the programme. Special labels, including programme's logo and selected educational theme, are placed next to different water use points, in toilets and bathrooms, etc. They aim to inform the users on the rational water consumption. The stickers are made from special material that is resistant to washing and wearing down and that doesn't spoil the surface that it is attached to. Except for the labels, which are only one of the elements of the educational campaign addressed to the building users, the teachers also receive dedicated educational material with the instruction how to use it.

The last step is monitoring of the economic and environmental results of the action. It includes the development of monthly reports and one final report, which is elaborated after the complete repayment of the costs incurred from the savings achieved. Except for the reports, also an Example of Good Practices is developed for each building involved.

The programme is recommended by the Energy Conservation Foundation in Warsaw. The solutions that it comprises of, including the water audit, were awarded by the Institute of Industrial Design in Warsaw. The award was granted under the category "The best designed services on the Polish market in 2012". The EFERGO company is also a laureate of the programme "Warsaw as the capital of ambitious business" and a winner of the contest organised by Money.pl portal and NETIA company, where it received 1 Mio PLN (approx. 0,23 Mio EUR) award for promotional activities, also concerning the programme discussed.





FINANCING SCHEME

The "Drop to drop" programme is building on the ESCO formula, where the investor engages his own capital in the solution that aims at obtaining both economic and environmental result. The costs incurred are repaid from the financial savings resulting from the reduction of water consumption, wastewater production and the consumption of energy needed to heat the water. The settlements between both parties involved are made on the monthly basis but already from the first day of the programme implementation a certain percent of savings (defined in the contract - usually 20-30%) is returned to the building owner.

- reduction of wastewater production - 35 615 m³
- reduction of energy consumption (concerning energy needed to heat the water) - 766 mWh
- reduction of CO₂ emission - 276 t

Except for the water-saving and energy-saving solution, in each building there were also implemented educational activities addressed to the building users, including staff, pupils, visitors, etc. Special labels were designed and produced to encourage rational use of resources and shape desired consumption habits.

PROJECT RESULTS

Currently, the "Drop to drop" programme is implemented on a larger scale in two municipalities, where it covers several dozens of buildings. It is also applied in single facilities from different regions of the country.

1. City of Częstochowa - 36 educational facilities, including schools, kindergartens, municipal boarding house and swimming pools.

Exemplary savings achieved due to the programme implementation from the end of November 2012 till December 2015:

- reduction of water consumption - 26 730 m³
- reduction of wastewater production - 26 730 m³
- reduction of energy consumption (concerning energy needed to heat the water) - 584 mWh
- reduction of CO₂ emission - 189 t

2. Capital City of Warsaw - 46 facilities, including schools, kindergartens, swimming pools and offices.

Exemplary savings achieved due to the programme implementation from the beginning of 2013 till December 2015:

- reduction of water consumption - 35 615 m³



MORE INFORMATION

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