



► “Fifty-Fifty”: Everybody wins when saving energy in Munich!

Background

Fifty-Fifty is an energy and water saving programme coordinated by the City of Munich that has been running in schools and kindergartens since 1996. It was first tested in 1994 in Hamburg, where all 450 schools are now participating.



It consists of an agreement between the municipality and the schools. Teachers and pupils are encouraged to reduce their energy and water consumption simply by changing their behaviours.

Half of the money saved directly goes to the school itself, as the name of the project suggests, and can be used for improving quality of life in schools.

This programme aims at:

- Playing a part in protecting the environment and reducing carbon emissions (ecological aspect)
- Teaching children about responsibility and using resources carefully (educational aspect)
- Saving energy and water costs (economic aspect)

Budget

Between €300 and €500 per school/kindergarten for information material, measuring kits and promotion of the programme.

The project was proposed as a measure to be integrated in the extended Integrated Action Program for Climate Protection in Munich (IHKM), with a financial support of €30,000 per year to cover the costs of the materials. The city council will decide on this issue in autumn 2014. This extra funding would enable to provide advanced trainings for teachers as well as for children, special measuring tools, competition, videos, games, educational workshops, etc.

Process

If they are interested in taking part in the project, the schools and kindergartens first have to address the Department of Education and Sports.

The department clarifies the requirements for participation:

- It is necessary to know whether the kindergarten/ school belongs to the city or the land of Bavaria.
- Will the necessary data on electricity, water and heating consumption be available?
- Is it possible to get a reference value from the last 3 years?





The second step is to visit the building to get an idea of its spatial and technical conditions. This is done together with representatives from the Departments of Education and Sports and of Public Building Construction, an energy consultant, a (pre-school) teacher and the caretaker of the building. The goal of the visit is to find out how energy and water can be saved by simple actions or behaviour changes besides low investment measures. The institution also gets some information material and a measuring kit (including multipoint connectors, thermometers for the rooms, a lux meter and a measurement equipment for the energy operating costs).



After a year, the Department of Public Building Construction will calculate the consumption of energy and water and the savings made from the new behaviours adopted in the building - against the reference value from the last 3 years. If the schools and kindergartens have achieved savings, they receive half of the

money saved for their own use. They can reinvest it in energy saving technologies or they can organise activities for the kids, such as a school party or an educational trip.

In the following years, the institutions have to inform the departments about any structural changes in the building or when they get new electrical equipment that would considerably alter the electricity consumption. That is very important to make proper calculations.

Results

Around 40 kindergartens and play groups and 130 schools have already signed up to the Fifty-Fifty programme, which is currently being expanded. Since 1994, a total of €5.49 million has been saved in energy and water costs, meaning a total dividend payment of €2.7 million to the participating institutions.

More than 8.5 million kilowatt hours of electricity, nearly 63 million kilowatt hours of heating energy and about 243,000 m³ of water have been saved so far. This equals to more than 16,000 tons of CO₂ – approximately 133,000 flights from Munich to Berlin.

This programme has been running for 17 years. The evaluation shows that it is possible to achieve high cost savings, preserve lots of resources and contribute to climate protection only by changing behaviours. That is why the programme is now supported by a climate protection manager paid for up to two-thirds by the German Federal Environment Office in order to encourage even more schools and kindergartens to participate in the programme.

