

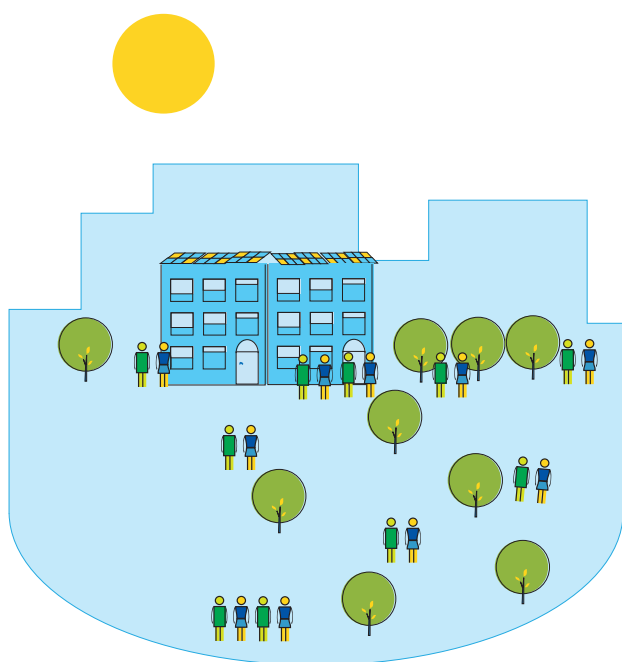
Sun kindergarten

The first passive building in Bulgaria

A Covenant of Mayors 2015 Case Study

In a nutshell

The “Sun Kindergarten” in Gabrovo is the first certified passive building in Bulgaria. The project was initiated by the municipality and the Centre for Energy Efficiency EnEffect, and received technical support from the Municipal Energy Efficiency Network EcoEnergy.

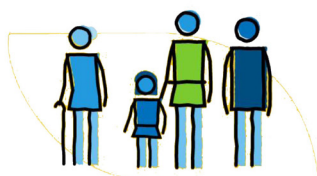


Gabrovo in numbers

Covenant of Mayors signatories in the country: 26

Number of inhabitants covered: 63,903

CO2 reduction target: 24% by 2020 (Baseline year 2008)



The municipality of Gabrovo: a pioneering city in energy efficiency

Gabrovo is one of the frontrunners in Bulgaria as regards energy efficiency policies, especially in the buildings and street lighting sectors. Gabrovo is a founder and key member of EcoEnergy. In 2013, the municipality joined the Covenant of Mayors. Its Sustainable Energy Action Plan (SEAP) has a strong focus on the construction sector, e.g. in regards to nearly zero-energy buildings. Gabrovo Municipality is strongly involved in implementing the National Programme for Energy Efficiency of Residential Buildings and the EU Directive on Energy Performance of Buildings.

A fruitful collaboration

Since 2012, Gabrovo Municipality has been a partner in the “Passive House Regions with Renewable Energies” project (PassREg). Under this initiative, the “Sun Kindergarten” project was launched by the city and EnEffect. EcoEnergy provided technical support for the project implementation. The project received its funding mostly through a loan from the European Bank for Reconstruction and Development (EBRD).

A flagship project

The “Sun Kindergarten” is the first certified passive building in Bulgaria. The kindergarten covers energy class “A” for net energy demand and complies with passive house standards. Its annual heating and cooling demand is roughly 15 kWh per square meter. The building features floor heating and highly-efficient ventilation with heat recovery, as well as solar panels that are used to heat water. The “Sun Kindergarten” is the flagship energy efficiency project of Gabrovo.

A demonstration project driven by excellence

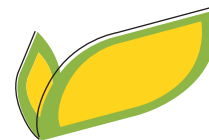
The design and planning phase of the project was completed in 2012. The construction works started in 2013 and were completed in September 2015. Experts from the field of construction, engineering, architecture and city planning were involved in the process. In the framework of the project, several regional building forums and study visits were organised, as well as capacity-building events that were conducted by buildings experts from the Technical University of Gabrovo - the local vocational high school of architecture and construction - and the Passive House Institute.

After completing its “Sun Kindergarten” project, the municipality will further increase its efforts in the field of energy efficient buildings. Gabrovo has recently joined the EuroPHit project through which the “St. Cyril and Methodius” school will be renovated according to passive house standards.

Project information

 www.gabrovo.bg

 www.ecoenergy.bg



Project numbers

Project duration: 2012-2015

Funding: European Bank for Reconstruction and Development (EBRD) mainly

€600,000 savings expected each year on municipal budget

3,400 MWh expected annual energy consumption reduction

2,176 tonnes expected CO₂ emission reduction each year

A significant climate impact

The “Sun Kindergarten” project as well as the renovation of “St. Cyril and Methodius” school will reduce Gabrovo’s annual energy consumption by more than 3,400 MWh. Furthermore, the energy savings achieved thanks to these projects will reduce municipal budget expenses by more than €600,000 each year. Gabrovo’s yearly CO₂ emissions are expected to decrease by 2,176 tonnes.



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