



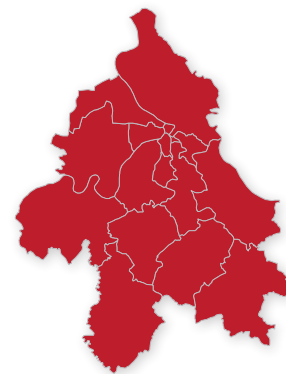
## BELGRADE 2

### KEY INFORMATION ABOUT THE PROJECT

IMPROVING ENERGY EFFICIENCY IN THE CITY OF BELGRADE - THERMAL  
REHABILITATION OF SCHOOL AND PRESCHOOL FACILITIES

EY ППФ6/EuropeAid/137044/DH/SER/RS

Sector: Energy/Energy efficiency



The main goal of the Belgrade 2 Project is to improve living conditions in Serbia through the protection of the local environment aimed at improving the energy efficiency of heating / cooling of public institutions.

Within the EU PPF program, a team of experts from the EU PPF6 project unit was tasked to prepare technical documentation for thermal rehabilitation and energy efficiency improvement for the following public institutions in Belgrade and Novi Sad:

- » Kindergarten „Слончићи“;
- » Kindergarten „Гуливер“;
- » Primary school „Војвода Мишић“;
- » Kindergarten „Чика Јова Змај“;
- » Kindergarten „Мрвица“;
- » Sports administration and medicine facility within SRC Košutnjak and
- » Business building of state bodies and organizations (old and new building) in Novi Sad.

The current thermal properties of these facilities are unfavorable. The lack of adequate investment maintenance in the last 20 years has resulted in unsatisfactory comfort, services and interior. The main goal of this thermal rehabilitation project is to improve living and working conditions by improving the energy efficiency of heating / cooling of these public institutions. Therefore, the proposed measures include investment maintenance as a precondition for the introduction of energy saving measures.



Rehabilitation of these institutions will include the following standard measures:

1. Replacement of windows.
2. Installation of facade insulation.
3. Roof insulation and renovation of waterproofing, together with gutter works and grounding installation.
4. Reconstruction of the heating system.
5. Renovation of electrical lighting installations and installations of new energy efficient lighting, inspection of switchboard cabinets and renovation, if necessary.
6. Renovation of existing air conditioning and ventilation systems.
7. Renovation of existing toilets and sanitation systems.
8. Renovation of floor coverings.
9. Installation of fire alarms and signaling.
10. Installation of building management system (BMS) and an energy monitoring system (EMS) that will provide continuous monitoring of energy consumption and potential savings.

## PROJECT OBJECTIVES

- » Reduced energy consumption by improving the energy efficiency of the buildings for at least one energy class after renovation.
- » Improving working conditions and sustainability of facilities.
- » Improvement of thermal conditions during the winter period, in order to ensure a minimum temperature of 20 ° C in the premises in use.

## PROJECT PURPOSE

As part of the EU PPF program, a team of experts from the EU PPF6 project unit will prepare the following technical documentation:

- » Project of the existing condition of the facility with a technical report on the condition of the facility
- » Energy efficiency Elaborates of the current and new status and Energy and Technical audit Report
- » Feasibility Study with Cost Benefit Analysis (CBA)
- » Terms of Reference for the renovation concept for each building including energy efficiency measures and other works
- » Conceptual Design for obtaining Location Conditions
- » Preliminary Design for obtaining the Decision on approval for the execution of works
- » Design for Building permit (if necessary)
- » Design for Execution of works
- » Tender documentation for works contracts

## RESULTS

- » As-built design and Energy audit for the kindergartens Guliver and Slončići – completed in June 2020
- » Conceptual Designs for kindergartens Guliver and Slončići – completed in June 2020 and revised in September 2021 - location conditions were obtained;
- » Preliminary Design for Guliver Kindergarten completed in May 2022 - Decision on approval for the execution of works was obtained;
- » Design for the construction permit for the Slončići Kindergarten was completed in May 2022 - Construction Permit was obtained;
- » As-built design, Energy audit and Energy efficiency Elaborate for kindergarten Čika Jova Zmaj and Primary School Vojvoda Mišić – completed and submitted during February 2021;
- » Conceptual Designs for kindergarten Čika Jova Zmaj and the Primary School Vojvoda Mišić -completed in April 2022;
- » Optional Analysis for the first 4 facilities prepared and submitted in January 2021.
- » Feasibility Study with Cost Benefit Analysis (CBA) for 5 buildings (Gulliver, Slončići, Čika Jova Zmaj, Vojvoda Mišić and Mrvica) submitted in February 2022.
- » For Sports administration and medicine facility within SRC Košutnjak and Business building of state bodies and organizations (old and new building) in Novi Sad the user independently prepared the project documentation (IDR, IDP and PZI) and obtained all permits and approvals.
- » The PPF6 team for these two facilities is currently preparing a Feasibility Study with the CBA.
- » The preparation of tender documentation for these two facilities is also planned.