

European Energy Service Award 2019

EOL1 – Energy Retrofit of Public Buildings in City of Ljubljana

Consortium of companies Petrol and Resalta with the City of Ljubljana (COL)

LJUBLJANA.
Zate

Resalta™

PETROL

Energija za življenje

Description

Background | Initial Situation

The public tender for the energy retrofit of the City of Ljubljana included 48 buildings: primary schools, kindergartens, libraries, cultural institutions, healthcare centres, sports centres and administrative buildings. The aim of the city was to improve energy efficiency in buildings and to decrease GHG emissions with minimal investment on its part and in accordance with the environmental policies of Ljubljana, the European Green Capital 2016. The project was implemented in accordance with Slovenian national legislation and EU Cohesion policy, with a total investment of 14.8 million €.

Challenge

Besides the large scale of the project that required coordination and careful scheduling in order to avoid disrupting public services and school terms, additional challenges were presented by the fact that multiple retrofitted buildings are part of Ljubljana's cultural heritage and required special care as well as permits and approval, as did objects where static reinforcement was necessary. Moreover, in order to ensure cohesion and state funds (40% of the budget for the 25 deep retrofitted buildings), the project had to provide for 25% of renewable energy sources in the energy share of the retrofitted buildings.

Solution | Measures

25 buildings were deeply energy retrofitted while 23 were partly retrofitted. To achieve the set energy saving objectives, the buildings needed proper insulation and 25% of energy should be provided from renewable sources. In both cases, the solutions implemented include heating, ventilation and cooling systems renovations,



Sport hall Kodeljevo (left) and Primary school J. Moškrič (right)

lighting retrofits, the replacement of windows, doors and the renovation of facades and roof isolation. Each building was fitted with energy management systems including data collection, alarming systems, remote control for monitoring and system operation.

Results

By implementing the measures within the project, we became a model of good practice within Republic of Slovenia and European Union. Main results: satisfied users, who have the benefits of the improved indoor comfort, achieved energy use reduction objectives and contribution to reduction of energy use pollution.

The consortium is continuing with retrofit of objects that will increase the effects. They are constantly following the objectives of sustainable development that will ensure that Ljubljana becomes an example of excellence concerning environmental, energy efficiency and sustainability issues.

Key Results

Energy savings:	8,245 MWh / year
Financial savings:	1 million € / year
Reduction of CO ₂ emissions:	2,956 t (around 150,000 trees or 340 ha of forest).

Contact

Alenka Loose

Phone: + 386 | 1 306 1107

E-Mail: alenka.loose@ljubljana.si

Blaženka Pospis Perpar

Phone: + 386 | 41 616 386

E-Mail: blazenka.pospis-perpar@petrol.si

Matic Baškovč

Phone: + 386 | 59 035 200

E-Mail: matic.baskovc@resalta.com

www.guarantee-project.eu



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