



Public-private partnership for a large scale building retrofit programme

Ljubljana, Slovenia

IN A NUTSHELL

Ljubljana is working with two private companies to realise Slovenia's largest ever energy retrofit contracting project, an investment of €14.9 million for the retrofit of 48 buildings. The interventions pay themselves off over fifteen years, and then begin to generate a profit.

Saving emissions and money

Many of the 48 buildings that have been retrofitted are city-owned and include sports facilities, schools, kindergartens, administrative buildings, libraries and health centres. The energy-saving interventions included replacing standard lighting with LEDs, modernising the heating and air-conditioning systems (which get a lot of use during cold winters and hot summers), insulating the walls and roofs and, where possible, switching energy sources from fossil fuels to sustainable energy sources. Buildings are directly connected with the private partner's surveillance centre (at Petrol), which enables an immediate response to any malfunctioning of built-in equipment, with the response time depending on the kind of fault detected.

The private companies Petrol and Resalta will maintain all of the upgrades for fifteen years. These companies together provided 51% of the funding for the interventions, while the remaining 49% was funded by the city of Ljubljana budget, and partly by EU Cohesion funds (only for the completely retrofitted buildings). For 15 years, the city will use the financial savings from reduced energy use to repay the companies for their work and investment.

The interventions in the 48 buildings are expected to save 8,245,534 kWh of energy, and 2,956 tonnes of CO₂ annually. These environmental saving also come with a financial reward: After 15 years the initial €14.9 million investment will be paid back, and then the city can help itself to all of the profits.



Primary school Jože Moškrič © Petrol

LJUBLJANA



Population:

279,631

Area

163.8 km²

Signatory to the Covenant of Mayors since:

2009

CO₂ emission reduction target:

30% by the end of 2020 compared to 2008

Knock-on effects

On top of reducing the energy consumption of buildings and being a good financial investment, this project will also improve the quality of life of the building users – from school and kindergarten children, to office workers, medical staff and athletes. The interventions mean greater comfort for all those who use the buildings.

Further, the city decided to allocate 10% of the extra income that it makes due to energy savings (about €50,000 annually) to a programme targeting school pupils to teach them about energy saving behaviours and renewable resources. The city hopes that the students will pass this knowledge on to their parents too. Changing the behaviour of building users is important to successful energy savings, so this mechanism is intended to increase those savings, while also funding better services.

Communicating to building users and more widely throughout the city about these sustainability measures will also increase the consciousness of locals about sustainability issues and may lead to energy-saving behaviours beyond the buildings in question.

The project will also have a positive impact on the local economy, as it will provide employment for as many as 100 local contractors.

In order to avoid a common problem in building retrofit, the disturbance and resulting complaints of building users during the works, all activities were carried out during the summer months when buildings were less populated.

This project has also had positive knock-on effects for the private partner, Resalta. The reputational gain as a successful player in energy efficiency recently helped the company secure a €12 million loan from the European Investment Bank (EIB). It has also helped the company secure a second, €4.8 million contract from Ljubljana for further retrofit activities.

The whole consortium, city and private companies, were also able to gain international recognition when their efforts and achievements were recognised with the European Energy Service Award.

Second iteration

The second retrofit contract between the cities and the same consortium (with the addition of a low-energy lighting company 'Public Lighting') follows the same model, with a fifteen-year maintenance contract and payback period. This contract covers the retrofit of 11 additional public buildings owned by the city of Ljubljana and was completed in 2019.

The expected energy savings are 2,260,000 kWh per year with an annual CO2 emission reduction of ca. 459 tonnes.

This model of successful public private collaboration for reducing energy consumption and CO2 emissions is a successful example of how business models for energy retrofit can bring together financial, social, and environmental local objectives.



48 buildings

28,245,534 kWh of energy saved annually

2,956 tonnes of CO₂ saved annually



FINANCING THE PROJECT

- + **Financing source(s):**
local budget, EU Cohesion funds, private sector
- + **Total project budget:**
€14.9 million
- + **Payback period:**
15 years

USEFUL LINKS

► Project video: <https://youtu.be/feqbGH8SATg>



CONTACT

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