



## 24 energy refurbished public buildings in one year using EPC

Municipality of Maribor with energy performing contracting implemented the biggest energy renovation project in the region in 2019. 24 public buildings were energy refurbished (schools, kindergartens, sport halls). Its implementation was followed by many stakeholders and media and is a good practice in the country. The cost of the project was 12 mio EUR. Yearly energy consumption was reduced by 5.952 MWh, energy costs by 446.000 EUR, maintenance costs by 28.500 EUR and CO<sub>2</sub> emissions by 1.305 tonnes.

### Energy inefficient public buildings

In 2018, the Municipality of Maribor selected 24 energy-inefficient public buildings for a comprehensive energy renovation. Energy-efficient measures and the introduction of renewable energy sources were implemented in primary schools, kindergartens, administrative buildings, the ice (skate) hall and the sports hall. They included insulation of envelopes, new windows and doors, insulation of attics and basements, renovation of heating systems, instalments of thermostatic valves, new LED interior lighting and introduced energy management. Special attention was paid to user involvement, information and educational activities to influence the good climate and energy behaviour. The project was funded by the EPC and the private partner completed the work in just one year. The results of the project are: annual reduction of energy consumption by 5.952 MWh, energy costs by EUR 446.000, maintenance costs by EUR 28.500 and CO<sub>2</sub> emissions by 1.305 tons. 1.000 MWh of renewable energy is yearly produced. Indoor working and living conditions have been significantly improved and users are very satisfied.



# Energy performance contracting as public private partnership

The project had huge energy saving potential therefore the energy performance contracting (EPC) in the legal form of public private partnership was the best option. With savings the investments will be paid off and still some savings are seen in the municipal budget. Through public procurement procedure private partner was selected and it is Slovenian ESCO, PETROL Group. The contract was signed for 15 years and saving are guaranteed through the agreement. The private partner has done the energy refurbishment of the buildings. It manages the energy related systems in the way that saving are achieved. The indoor comfort and heating and lighting standards are assured. In many buildings the comfort is even better than before. The public partner repays it with the savings during the contract period. After the end of the contract period all savings remains with the public partner. During the concession, the private partner ensures the maintenance of newly installed or renovated energy devices and systems. The project was financed 50 % by private partner, 35 % by Cohesion fund and 15 % by the Municipality of Maribor. Project is monitored regularly and savings checked by energy agency. The users are also interviewed about their perception of indoor comfort and management.

## Public perception

Slovenia as former communist country historically has no trust in private sector. The project of energy refurbishment of 24 public buildings was first of its kind in the region to be implemented with public private partnership. After 3 years of operation when savings are achieved the stakeholders believe that the project is good. It is true that it could be even financially improved in some part. The big success is that the trust was built and the municipality is already planning new energy performance contracting projects with private partner.

## 24 renovated buildings

Municipality and building users are very happy that project was finalized in only one year. Most of the work was done in school holidays and private partner has respected the user's needs during the renovation and now. The buildings are energy efficient, have good working and living conditions. The energy systems are new and operated and maintained by private partner what means also less work for housekeepers that sometimes have challenges to work with new equipment. And last but not least the buildings with new facades look very nice also from outside.

## 1.300 tonne of CO<sub>2</sub> per year less for 24 public buildings

- Pool of 24 public buildings energy renovated in one year
- Using energy performance contracting for 15 years
- Overall budget of the project 12 mio. EUR
- Co-financed by Cohesion fund
- Public private partnership established with the largest ESCO in Slovenia
- Energy consumption reduced by 5.952 MWh
- CO<sub>2</sub> emissions reduced by 1.300 tons per year
- 1.000 MWh of RES used per year
- Well improved working and living conditions for the users (children in kindergarten and schoolchildren)
- Good practice for the region with replication potential

Photos: ENERGAP



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