



# Pivka bundling investments with peers for energy efficient lighting

## Pivka, Slovenia

### IN A NUTSHELL

*Pivka joined GOLEA Local Energy Agency's proposal to group together 33 municipalities and public bodies in one large project and apply for an ELENA technical assistance grant. Thanks to the support, Pivka implemented an Energy Performance Contracting project to modernise its street lighting, achieving a 75% reduction in electricity consumption.*

### **❏ Bundling investments: how small towns can get technical assistance for energy efficiency**

For small municipalities like Pivka in the Primorska Region of Western Slovenia, lack of access to EU funded technical assistance and upfront investment for large scale energy efficiency projects constitute major barriers to decarbonising their public infrastructure. Energy performance contracting (EPC) offers an opportunity to municipalities for implementing energy efficiency and renewable energy projects through public-private-partnerships (PPP). However, implementing EPC poses a capacity challenge to many small local authorities due to insufficient know-how or human resources. This is why Pivka joined GOLEA Local Energy Agency's proposal to group together 33 municipalities and public bodies in one large project<sup>1</sup> and apply for an ELENA technical assistance grant, that would support municipalities in the preparation of energy efficiency projects.

### **❏ Setting up a street lighting renovation project in Pivka**

As part of the project, Pivka completed a comprehensive retrofit of its public lighting in 2018. Old street lights and all floodlights for public buildings and monuments were replaced with LED bulbs. The project bundled all public lighting in a single renovation to achieve optimal energy and financial savings. The investment value amounted to €410,000 and Pivka decided to develop an Energy Performance Contract. The whole project was funded by the energy service company Interenergo d.o.o., whose upfront investment will be fully reimbursed on the basis of the achieved savings for lower electricity



LED street lighting in Pivka  
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## PIVKA



Aerial view of Pivka © Valter Leban

**Population:**

6,044 (2018)

**Area**

223.3 km<sup>2</sup>

**Signatory to the Covenant of Mayors since:**

2015

**CO<sub>2</sub> emission reduction target:**

40% (2030)

1. Preparation and Mobilisation of Financing for Sustainable Energy Investments in Primorska Region Municipalities (PM4PM)

use and lower lamp maintenance costs over the next 10 years. Over the same period, Pivka will additionally realize savings of €320,000.

Pivka benefited from technical assistance under the ELENA grant to develop the project. GOLEA's Project Implementation Unit supported Pivka during all project stages: analysing and deciding on an appropriate financing option for the investment project, carrying out technical and economic feasibility analysis necessary for the EPC project preparation process, such as energy baselines, energy audits, project design documentation, and national legislation compliance checks. Pivka also received external technical assistance from the Institute for Public-Private Partnership<sup>2</sup> in the preparation of the PPP tender documentation, and during the procurement process supporting the municipality in adopting legal acts on EPC.

## Improvements in energy efficiency in Pivka

Within 5 months, 1,251 lamps were replaced by LEDs. This has led to a 75% reduction in electricity consumption in public lighting, accounting for annual energy savings of 630 MWh, equivalent to 315 tonnes/year of CO<sub>2</sub> savings. On top of the reductions in greenhouse gas, the project has contributed to achieve other environmental and human benefits: due to the new LEDs, most sections of the roads are much better and evenly illuminated in comparison to the old lights, resulting in improved traffic safety for citizens. The illumination now complies with the European standard EN 13201 on road lighting, whereby lamps no longer emit light upwards into the sky, reducing unwanted lighting of the facades of buildings in residential areas. All lamps have a color temperature of 3,000 Kelvin and an automatic three-level dimming function which activates at nighttime. These measures reduce unnecessary lighting and in particular, minimize the blue light component, which has a negative effect on the circadian rhythm of humans and nocturnal animals.

## Lessons learned in Pivka and other municipalities

The projects implemented in Pivka and the other municipalities have raised awareness and offered valuable lessons to spread energy performance contracting in Slovenia. First, public-private partnerships for energy efficiency projects can be economically feasible even for small municipalities if precisely planned from a legal, technical and economic point of view. This requires close collaboration with the ESCO and all other partners from the beginning to ensure the expected energy efficiency gains will be met. Second, to overcome small municipalities' administrative capacity gaps, local authorities can benefit from the technical know-how of and the support of energy agencies for bundling investments. Moreover, the support offered to municipalities has initiated a wider thinking on how to approach the development of new projects.

In total, the 33 public authorities in the PM4PM project implemented investments in energy efficiency of buildings, district heating using renewable energy sources and street lighting amounting to over €49 million during the four years of the ELENA technical assistance. This has led to significant environmental and societal benefits: the combined estimated energy savings for the 33 municipalities correspond to 22.34 GWh/year and total renewable energy production is estimated at 13.36 GWh/year, equivalent to an annual CO<sub>2</sub> reduction estimated at 8,172 tonnes/year. In addition, the PM4PM project directly created approximately 500 new jobs for implementation of energy efficiency measures across the region.

2. Inštitut za javno zasebno partnerstvo, zavod Turjak

### KEY FIGURES

- 1,251** street lights replaced by LEDs
- 75%** reduction in electricity costs
- 630 MWh/year** energy savings
- 315 tonnes/year** savings of CO<sub>2</sub>

### FINANCING THE PROJECT

- + **Financing source(s):**  
upfront private investment for street lighting from Interenergo d.o.o.
- + **Total amount in Pivka:**  
€335,955
- + **Financing source for technical assistance:**  
ELENA grant (European Local Energy Assistance) with EIB contribution of 90%.
- + **Technical assistance for Pivka:**  
€12,197
- + **Total technical assistance for PM4PM project:**  
€2,250,000
- + **Total investments in PM4PM project:** €49.5m

### USEFUL LINKS

- Street lighting in Pivka: <https://www.siteco.com/news/pivka>
- ELENA Completed Project Factsheet: <https://www.eib.org/attachments/documents/elena-project-factsheet-pm4pm.pdf>
- ELENA Project website: <https://www.golea.si/elena>

### CONTACT

For more information on the project, please contact:  
Irena Pavliha, Project Manager, GOLEA Goriška Local Energy Agency, [Irena.pavliha@golea.si](mailto:Irena.pavliha@golea.si)  
Bostjan Glažar, Municipality of Pivka, [Bostjan.glazar@pivka.si](mailto:Bostjan.glazar@pivka.si)