

## D.T3.5.1. PA2 - SI: IMPLEMENTING THE DEFINED PILOT ACTIONS IN MUNICIPALITY OF KOPER



ENES-CE - Collaboration between public bodies and citizen energy groups in implementing local energy strategies in Central Europe

### FINE FACTS ABOUT MUNICIPALITY OF KOPER REGARDING THE IMPLEMENTATION OF THE ENES-CE PROJECT

The Municipality of Koper is firmly committed to reducing greenhouse gases and increasing the share of renewable energy sources. With the aim of achieving an efficient and secure energy supply, the Municipality of Koper has been discussing energy policy in detail for years. The ENES-CE project, with which the municipality lays the foundation for the establishment of the first solar energy cooperative and a pilot project investment into smart lighting, will also make an important contribution to the reduction of greenhouse gases.

### SPECIFICATION OF PLANNED PILOT PROJECTS

In the area of the Municipality of Koper there is a great potential for the use of solar energy, unfortunately its exploitation is still minimal. Within the ENES-CE project Municipality of Koper supported the creation of a solar energy cooperative in the suburban area of the municipality. A group of individuals who share the desire to produce electricity from a clean source - the sun were invited to take an active role.

Planned pilot action investment within the ENES-CE project supported the renovation of public lighting as one of the main action of the energy plan. Investment into a smart lighting - modernisation of public lighting was made in accordance with the Decree on limit values due to light pollution of environment, with amendments and supplements. Technologically obsolete and energy-consuming lamps were replaced with modern, environmentally friendly and energy-saving lamps that are now connected to a system with smart control.



### QUICK FACTS ABOUT MUNICIPALITY OF KOPER

- > Country: Slovenia
- > Region: Western Slovenia (NUTS 2); Coastal-Karst (NUTS3)
- > Total area: 303 km<sup>2</sup>
- > Number of inhabitants: 53.292
- > Public authority/government: Municipality of Koper
- > Expected t(CO<sub>2</sub>) savings within the pilot projects implementation: -
- > Expected number of stakeholders involved in the pilot projects implementation: -

### PREPARATORY STEPS FOR ESTABLISHMENT OF A SOLAR ENERGY COOPERATIVE

In the first step, the legal bases of renewable energy sources and cooperatives were reviewed. In cooperation with Goriška local energy agency several workshops and meetings were implemented with different stakeholders - citizens of local community Sv. Anton, school, Local community Sv. Anton and House of culture.

An analysis of the roof of the Primary school Sv. Anton for the installation of a solar power plant was prepared and a draft of the Act and Rules of the Solar cooperative of St. Anton was elaborated.

A special business model was prepared:

- Solar cooperative will invest in the installation of a solar power plant.
- Members of the cooperative will pay the agreed amount to join the cooperative.
- Members will increase energy self-sufficiency and will save money while ensuring environmental benefits in the form of reducing CO<sub>2</sub> emissions.

## PREPARATORY STEPS FOR IMPLEMENTING PILOT ACTION

Modernisation of public lighting was made on Slemenska road at Hrvatini. 36 inefficient luminaires were replaced with new LED luminaires. Control equipment for lighting control and management was installed - the so called SCADA system. SCADA system can communicate with an individual lamp by controlling the operation of the lamp, adjusting the power of the lamp, as well as location detection and fault analysis.



Energy savings and operating costs of the installed SCADA system, together with LED lighting technology, will contribute up to 60 percent lower lighting costs. On the other hand, this technology prolongs the life of the lamps and further contributes to the reduction of light pollution. Energy consumption after the implementation of the investment will decrease by 9.876 kWh per year. Energy cost savings are estimated on 1.086,40 €.

CLIMATE CHANGE HAS BECOME A COMMON CONCERN OF ALL MANKIND - A TRANSITION TO CLEAN ENERGY IS NEEDED.

## EXPECTED RESULTS

By laying the foundations for the energy solar cooperative Municipality of Koper tried to involve citizens in the process of energy transition and contribute to the energy independence of both the municipality and its citizens. We have thus encouraged citizens to have access to renewable energy sources, which will significantly help to reduce household costs and, at the same time, encourage a more responsible and sustainable attitude towards the environment.

Pilot action investment into smart lighting will help Municipality of Koper to reduce electricity consumption, increase traffic safety in the environment and contribute to the reduction of light pollution. Light pollution is not only an aesthetic problem, it also has many consequences for the environment. Irrational lighting leads to excessive electricity consumption, high costs, and an increase in greenhouse gas emissions.