

0.11.1

Innovative energy efficiency public lighting solutions in Split

Project index number and acronym	CE496 CitiEnGov
Responsible partner (PP name and number)	PP4 - City of Split
Linked to pilot action (number and title)	Pilot action 3 / Pilot solution for innovative public lighting in Split
Project website	https://www.interreg-central.eu/Content.Node/CitiEnGov
Delivery date	04.2019

Description and technical characteristics of the investment

The Investment is in new innovative public lighting solution in city of Split pilot urban neighborhood, chosen among the others as presenting a standard situation, similar to most of the other urban parts of the city, covering an area of about 18.000 sq.m. The Investment consist thematic equipment for 80 lighting points improved with 82 LED lamps for road lighting and 82 addressable controllers for central management and data collection through GSM signal with total power of 3,05 kW. Built-in lamps conform to Croatian and European road lighting standards (Standard HRN EN 13201-2:2016) and have IP66 protection against atmospheric influences. They are also in compliance with the Law on light pollution protection, and the color temperature of the light is 3000K. Contracted service provider delivered 10-Year Warranty for delivered equipment.

Investment costs (EUR) including a break-down of main cost items

Main cost categories are: Works for equipment installation, Software for data collection and management, Thematic equipment.

- Works costs: 4.161,42 €
- Software costs: 10.386,64 €
- Thematic equipment costs: 57.982,48 €

Investment location

NUTS 3	Address (Street, house number, postal code, city, country)	GPS coordinates
Country (NUTS 0): HR, Hrvatska Region (NUTS 2): HR03, Jadranska Hrvatska Sub-region (NUTS 3): HR035, Splitsko-dalmatinska županija	Streets: Šetalište Petra Preradovića, Put Firula, Spinčičeva, Šetalište Kalafata Postal code, city, country: 21000, Split, Croatia	

Duration and process of investment implementation

Start date	End date
03/2017	07/2018

Major milestones of investment implementation

- Main Project for Public lighting modernization delivered in 12/2016
- Publication of public procurement procedure in 03/2017
- First complaint on documentation in 03/2017 procedure was stopped for 60 days (reason old Standard HRN EN 13201-2:2008 used in Main project)
- Revised Main Project delivered in 06/2017 (with new Standard HRN EN 13201-2:2016)
- Public procurement procedure started again on 07/2017
- Selection procedure finished in 09/2017
- Second complaint on selection procedure in 10/2017 and procedure was stopped again for 60 days
- New selection procedure finished in 01/2018
- Third complaint on selection procedure in 01/2018 and procedure was stopped again for 60 days
- Final decision from State Public procurement commission published in 03/2018
- Contract with Contractor ELOS d.o.o. signed in 04/2018
- Equipment and Software are installed in 05/2018
- New Smart and Energy efficient public lighting system was put in service 07/2018

Ownership and durability of the investment (e.g. maintenance, financing)

The area where the investment is located is under City of Split ownership, and it will remain under the City of Split ownership after the end of the project. After the project end, the investment supposed to be maintained by the City of Split but contracted service provider delivered 10-Year Warranty for LED lamps for road lighting and Addressable controllers for central management and data collection so the maintenance is not needed for 10 year period. Also the energy, ecological and financial result of the Investment is better than planned so it gives very good example for future Investments in Public lighting sector. Also this Investment saving was helpful to the City of Split in decision to go step forward in Public lighting. We decide to modernize Public lighting system in total, it consist 17000 lamps and cover 400 km of roads. Preliminary calculations came up to 9.000.000 kWh annual savings and CO₂ reduction up to 2.200,00 tons annually.

	BEFORE	PLANNED	FINAL
Number of lamps	79	82	82
Total power	15,95 kW	3,50 kW	3,05 kW
Annual CO ₂ emission	15,35 tons	3,85 tons	2,90 tons
Annual energy consumption	65.379 kWh	16.579 kWh	12.476 kWh
Annual energy costs	6.400 €	2.000 €	1.200 €
Annual maintenance costs	2.800 €	0 €	0 €

References to related pilot action (output fact sheet) and relevant deliverables (e.g. pilot action report, studies) and web-links.
If applicable, additional documentation, pictures or images to be provided as annex

Related pilot action:

- Project outputs: O.T3.2.1; O.I1.1.1
- Project outputs titles: Pilot actions for improving local/regional Energy performance in 6 Countries; Innovative energy efficiency public lighting solutions in Split

Relevant deliverables:

- Deliverables: D.T3.4.1; D.T3.4.2; D.T3.4.3; D.T3.4.4; D.T3.4.5; D.T3.4.6
- Deliverables titles: Baseline scenario of the public lighting in Split; Public procurement procedure-best EE solution for public lighting (equipment purchase); Implementation and personalization of the system (incl. maintenance); System monitoring; Business plan outline; Report on pilot action 3: Green public lighting system in Split
- Description of deliverables: Study for Pilot project area definition with AS-IS situation and modernization plan; Main technical project for Pilot project implementation; Green public lighting system; Study of analysis Green public lighting system

Web-links:

- http://toolkit.citiengov.eu/index.php?title=Pilot_projekt_%E2%80%93_Sistem_pametne_zelene_javne_rasvjete_u_Gradu_Splitu
- <http://www.split.hr/Default.aspx?art=9995>
- <http://www.split.hr/Default.aspx?art=10068>
- <https://www.ekovjesnik.hr/clanak/721/grad-split-kroz-eu-projekt-citiengov-postavio-pametnu-javnu-rasvjetu>
- <https://www.dalmacijadanas.hr/pametniji-split-nova-rasvjeta-od-bacvica-do-zente-godisnje-ce-ustedjeti-60-tisuca-kuna>
- <https://splitskidnevnik.rtl.hr/vijesti/grad/splitske-bacvice-dobile-pametnu-javnu-rasvjetu/>
- <https://dalmatinskiportal.hr/vijesti/pametna-javna-rasvjeta-od-sutra-navecer-na-bacvicama/33266>
- <https://dalmatinskiportal.hr/energija-i-ekologija/mozda-je-ovo-mali-korak-za-grad-split-kao-instituciju--ali-je-veliki-za-gradane-jer-ulazimo-duboko-u-sferu-smart-cityja/33316>
- <http://www.dalmacijanews.hr/clanak/e59l-pametnom-rasvjetom-u-nastavak-razvoja-splita-kao-smart-cityja>
- <https://lokalni.vecernji.hr/gradovi/splitske-bacvice-dobile-pametnu-javnu-rasvjetu-9969>
- <https://lider.media/aktualno/splitske-bacvice-dobile-pametnu-javnu-rasvjetu-29509>

Deliverables photos:



Investment photos:

