

## Description of works to reduce Energy Consumption

### Installation of a new central heating system



Installation of heating pump



Replacement of the old heating radiators with new fan coils

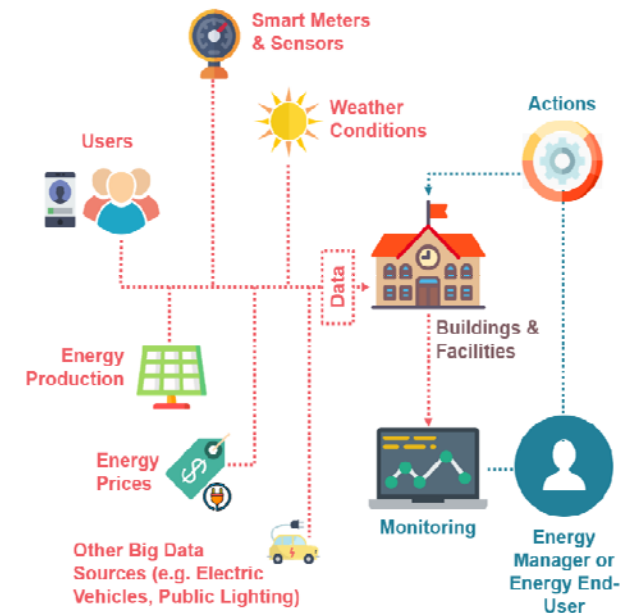


Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## Description of works to reduce Energy Consumption



Replacement of the old lighting with new LED technology lighting



Installation of energy management system



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## Description of works



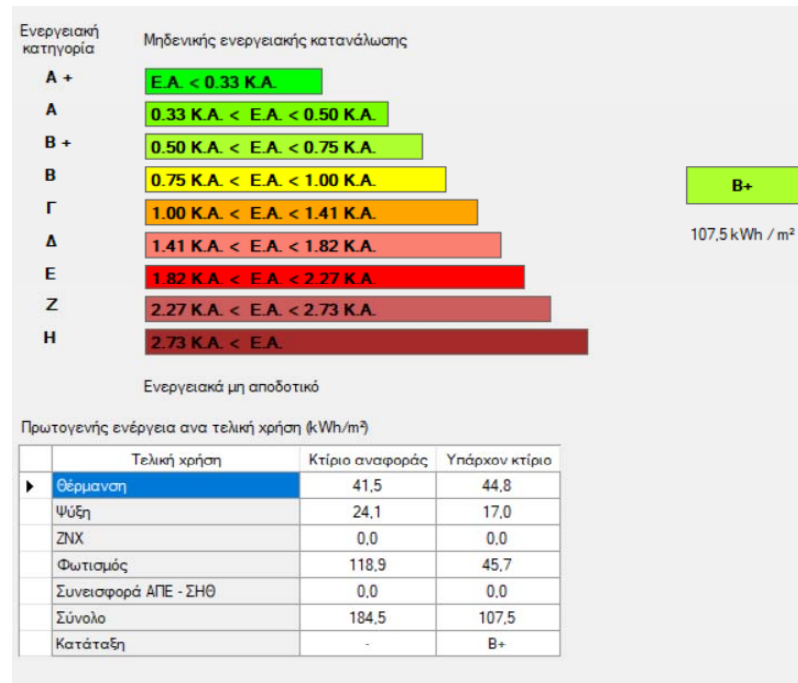
### Installation for charging electric vehicles (EV)

- Increasing the power of the electricity network from single-phase to three-phase
- Improve the electrical grounding of the electricity network of the building



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## Energy consumption after the implementation of the works



**Reduction of the energy consumption per 433,8 kWh/m<sup>2</sup> or 80.14 %**



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## Budget and timetable of the project

The budget of the project is 280.000 €

The contract was signed on August (17.08) and the contractor has the obligation to deliver the project in 5 months (17.01) according to the following time table

The works have started on 29 of October

Timetable

α/α	Φάσεις Υλοποίησης Προμήθειας	Μήνες					Τουλάχιστον 1 έτος
		1	2	3	4	5	
1	Φάση 1: Υπογραφή σύμβασης						
2	Φάση 2: Παράδοση και εγκατάσταση εξοπλισμού						
3	Φάση 3: Θέση σε λειτουργία συστήματος						
4	Φάση 4: Εκπαίδευση						
5	Φάση 5: Δοκιμαστική λειτουργία συστήματος – Παράδοση συστήματος						
6	Φάση 6: Εγγύηση καλής λειτουργίας						



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## The progress of planned works



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg  
IPA CBC Programme "Greece – Albania 2014 – 2020"

## The progress of planned works



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg  
IPA CBC Programme "Greece – Albania 2014 – 2020"

## The progress of planned works



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg  
IPA CBC Programme "Greece – Albania 2014 – 2020"



## The progress of planned works



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg  
IPA CBC Programme "Greece – Albania 2014 – 2020"

## Difficulties and problems

- **The prices of the materials have increased dramatically** the last couple of years. As result at the first tender, there were no bid for contract from a contractor and the tender procedures have to repeat and also the study to change in order to reduce the cost.
- **The tender procedures were for an international commission tender** because the budget was above the limit of a national tender.
- **The weather conditions do not allow the whole year the works to be done**
- **The study has changed**



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

## Difficulties for small mountain Municipalities

- **Access is difficult due to the distance from urban centers**  
Suppliers and Contractors prefer projects that are closer to them.
- **Projects have small budget**  
Contractors prefer big budget projects
- **The weather conditions are not good the whole year**  
This limits the amount of time during which the work has be done,
- **The settlements and the villages are scattered and the distances are long even within the Municipality**



## Opportunities for small mountain Municipalities

- **The projects are on a smaller scale**  
Funding can be found through European and national resources
- **Buildings are renovated and upgraded and energy costs and management costs are reduced**
- **Municipalities, universities and enterprises come into contact and exchange good practices**
- **Linking universities with small municipalities and help from universities in issues related to the preparation of studies.**



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme "Greece – Albania 2014 – 2020"

***The Project:*** “Sustainable and almost zero-emission communities and the role of public buildings” | *nZCom*

**THANK YOU FOR YOUR ATTENTION !**



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme “Greece – Albania 2014 – 2020”