

# GREENLIGHT PROJECT

SECTOR:

Street lighting

**PARTNER:**

**Hostětín**

**MUNICIPALITY**  
(Czech Republic)

Street lighting often suffers from low priorities among the representatives of municipalities – as it does not represent the major part of towns' energy bills. However, significant energy savings are possible, if outdated light sources would be replaced by new ones. Other benefits include safety, appearance and low operation costs. The municipality of Hostetin in the Czech Republic has allied with the Philips Lighting corporation to upgrade its public lighting system to the highest possible energy efficiency standard.

## PARTNER

Hostetin is a municipality with 230 inhabitants in the eastern part of the Czech Republic. It is well known for many environmental activities, such as biological agriculture, low energy buildings, renewable energies etc. As a part of this effort the municipality has also initiated a request for the reconstruction of its lighting system. The total energy savings enabled by this reconstruction reached the level of 47%.



## CONTEXT

The street lighting system in Hostetin originated from the 1960 and 1970s. It was represented by obsolete state of technology, high energy consumption and the phenomena of disturbing light. The total electricity consumption was higher than the installed capacity of the lighting system, due to the usage of ineffective magnetic dimmers. The general level of lighting in streets was inefficient and the light was emitted also to unwanted directions.

## EXPERIENCE OF THE PARTNER

### Partnership process

As stated above, the municipality of Hostetin is very active in the field of environmental protection and organises many activities in favour of renewable energy sources, energy efficiency, landscape protection, biological agriculture etc. Due to this it has also allied in partnership with the Philips Corporation which has conducted the project from its planning to the final realisation stage. It has used the most modern and efficient light sources to ensure the best possible performance of the street lighting system. Philips Lighting Czech Republic is the GreenLight endorser, the municipality of Hostetin has become the GreenLight partner due to this reconstruction.

## Technical data

The original level of installed capacity of the lighting system was 3815 Watts. But due to the usage of ineffective magnetic dimmers the system had a consumption of over 5 kW. A more recently built part of the Hostetin street lighting had contained a more effective sodium discharge lamps and was emitting light also towards the sky. The reconstruction has involved the usage of most modern Philips high pressure sodium discharge lamps Master SON T PIA Plus with electronic ballasts, at the first time in the Czech Republic there were also used halide discharge lamps Cosmopolis - Cosmo White with a high quality white colour, which represent the top of the market in energy consumption, long lifetime period, recyclability, minimum content of deleterious stuff, case used atc.. The electricity consumption of the lighting system after the reconstruction has decreased to 2,03 kW. The total electricity consumption per year before the reconstruction was 16 343 kWh, with the current system it is 8769 kWh, which is a decrease of 47%!



## COST AND BENEFITS

### Economical

The lighting reconstruction has reached the energy efficiency range of 47% with the payback period of just over 7 years.

### Environmental

Environmental benefits include some 7665 kWh of electrical energy saved every year, which represents ca. 7 000 tons of CO2 emissions annually. It also lowered the light pollution by emitting light only to the desired direction.

## EVALUATION AND OUTLOOK

The lighting system was designed to show it as an example of a well prepared project which is also suitable for many other municipal street lighting projects. The quality of light, low level energy consumption, and other features ensure lower energy bills for the town council and higher level of satisfaction for the town inhabitants and visitors.

## FURTHER INFORMATION

Name of the contact person: Radim Machu  
Position: member of town council  
Organisation: Hostetin Municipality  
Address: Hostetin Municipality (obecny urad), Hostetin, Czech Republic  
e-mail: [hostetin@iol.cz](mailto:hostetin@iol.cz)  
web: [www.hostetin.cz](http://www.hostetin.cz)  
Philips contact: Jiří Kolařík, [jiri.kolarik@philips.com](mailto:jiri.kolarik@philips.com), tel: 233 099 111

Prepared by:

Juraj Krivošík, SEVEN, The Energy Efficiency Center, [juraj.krivosik@svn.cz](mailto:juraj.krivosik@svn.cz), the GreenLight National Contact Point for the Czech Republic.

[www.eu-greenlight.org](http://www.eu-greenlight.org)

*This GreenLight Good Practice Case Study was prepared under the New GreenLight project with a partial support of the European Commission. The sole responsibility for the content of this publication lies with the authors. The views expressed here do not necessarily reflect the views of the Commission. The European Commission is not responsible for any use that may be made of the information contained therein.*

