

LESIMPORT



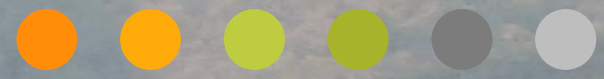
DESIGN, MANUFACTURING AND
INSTALLATION OF LED STREET LIGHTING



Lesimport Ltd

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Our Work



Awarded for one
of 12 best practices
In Europe by the
European Union
2007-2013



First in Bulgaria
to make an entire
municipality's public street
lighting independent of
the electrical
grid.

Our Work

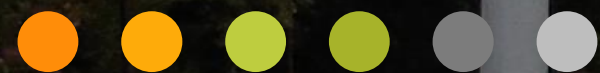


4 counties
in Bulgaria

Over 50
cities &
settlements

manufacturing
capacity: **2000**
units per
month

Recognition from the EU



Village renewal from green street lights in rural Bulgaria

The municipality of Kainardja used EAFRD funding to improve public services while modernising the energy infrastructure through the introduction of a solar street-lighting system. The project contributed to a broader sustainable energy strategy of the municipality.

From lagging behind to pioneering

The Kainardja municipality in north-east Bulgaria is considered a backward rural area due to its low infrastructure development, insufficient public services, high unemployment and low average income per capita.

To address the issue of inadequate and costly conventional street lighting, the municipality applied for RDP funding to invest in the building and installation of solar lighting fixtures.

The installation of solar street lighting was a new, innovative project idea back in 2009 that had never before been applied in practice in Bulgaria. It fell within a broader strategy of the municipality to invest in energy efficiency and renewable energy sources in order to deliver social and economic benefits in environmentally friendly ways.

"It took a lot of courage and determination to apply for funding and invest in such a project and follow it through. It was not easy to justify and decide on a risky investment that was almost as much as the municipality's yearly budget."

Ljuben Siliev
Mayor, Municipality of Kainardja

Combining social, economic and environmental benefits

The project consisted in the installation of 486 lighting fixtures – including solar panels and rechargeable batteries for each of them – in nine of the 15 villages in the municipality. The fixtures get charged through solar energy and can operate for 14 hours a day even in severe winter conditions when daylight is limited.

The solar street lighting installed by the project allows the lighting of 59 streets in Kainardja throughout the night. This benefits over 5 000 people from the local population.

Besides these social benefits, the project significantly reduced the municipality's energy expenditures as the lighting system does not involve any running costs. And as they operate on a clean energy source, they do not have a harmful effect on the environment.

"The conventional street lighting was on for only two to three hours a night, it went off around 23:00 in the evening and we did not have the financial means to cover even these expenses. Thanks to the solar fixtures, the streets are lit all night long and this does not involve any running costs."

Bonka Yordanova
Chief expert, 'Economic development, operational programmes and cooperation',
Municipality of Kainardja

The success of the project was recognised on a national level: it was selected in 2015 as best practice in 'renewables' by the Bulgarian Rural Network. The project turned into a kind of de facto pilot project that inspired several similar projects throughout the country which also benefitted from Rural Development Programme funding.



EAFRD support has enabled a disadvantaged municipality in Bulgaria to provide solar-powered street lighting with low economic and environmental impact.

Renewable energy infrastructure

Renewable energy infrastructure



The project has enabled the lighting of 59 streets in Kainardja throughout the night.

An ongoing sustainable energy priority

In addition to European objectives for energy efficiency and greenhouse gas (GHG) emissions reduction, each municipality in Bulgaria has individual sustainable energy targets. These aim to contribute to the overall national objective of investing in sustainable energy use.

In Kainardja, targets were set to be achieved in two stages: in 2013 and 2016. In addition to the solar street-lighting project, it implemented another two projects on the energy efficiency of public buildings.

Through these projects, the municipality achieved all its targets already by 2013. Nevertheless, it will continue to pursue an active policy of investing in

clean energy infrastructure and introducing alternative energy sources.

"We managed to reach all our sustainable energy targets already at the end of 2013, three years ahead of schedule. We also reduced costs by far more than initially planned."

Bonka Yordanova
Municipality of Kainardja

The positive results of the solar street-lighting project proved the benefits of investing in environmentally friendly solutions to improve the quality of life of the local population and reduce economic costs.

Project Name:	Building a Street Light System Using Solar Energy in the Municipality of Kainardja
Type of beneficiary:	Municipality
Period:	2010-2013
Funding:	• Total budget: € 981 322 • EAFRD contribution: € 834 124 • National contribution: € 147 198
Further info:	http://www.enrd.europa.eu/enrd/bg
Contact:	bonka.yordanova@bulb.bg

The Technology



controller with an automatic switch on/off system

Smart software device, designed and developed by Lesimport Ltd. Bulgaria



photovoltaic panel

Weatherproof, highly effective, latest generation solar panel technology



highly effective light-emitting diode casing

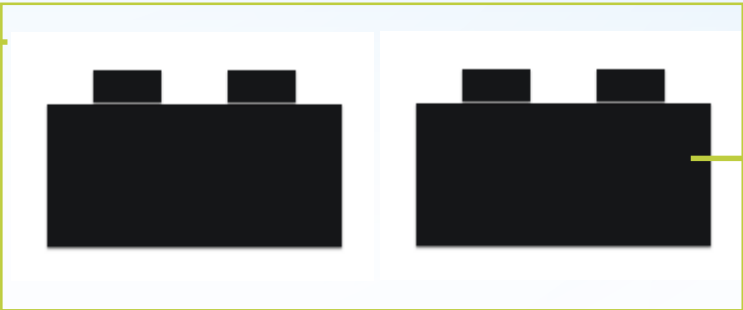
Weatherproof body with latest generation LED

steel post

Corrosion resistant, galvanized coating and a windproof body

high-capacity gel battery

Long-life, designed and calculated specifically for solar street lights. Sealed in water- and moist-proof boxes underground.

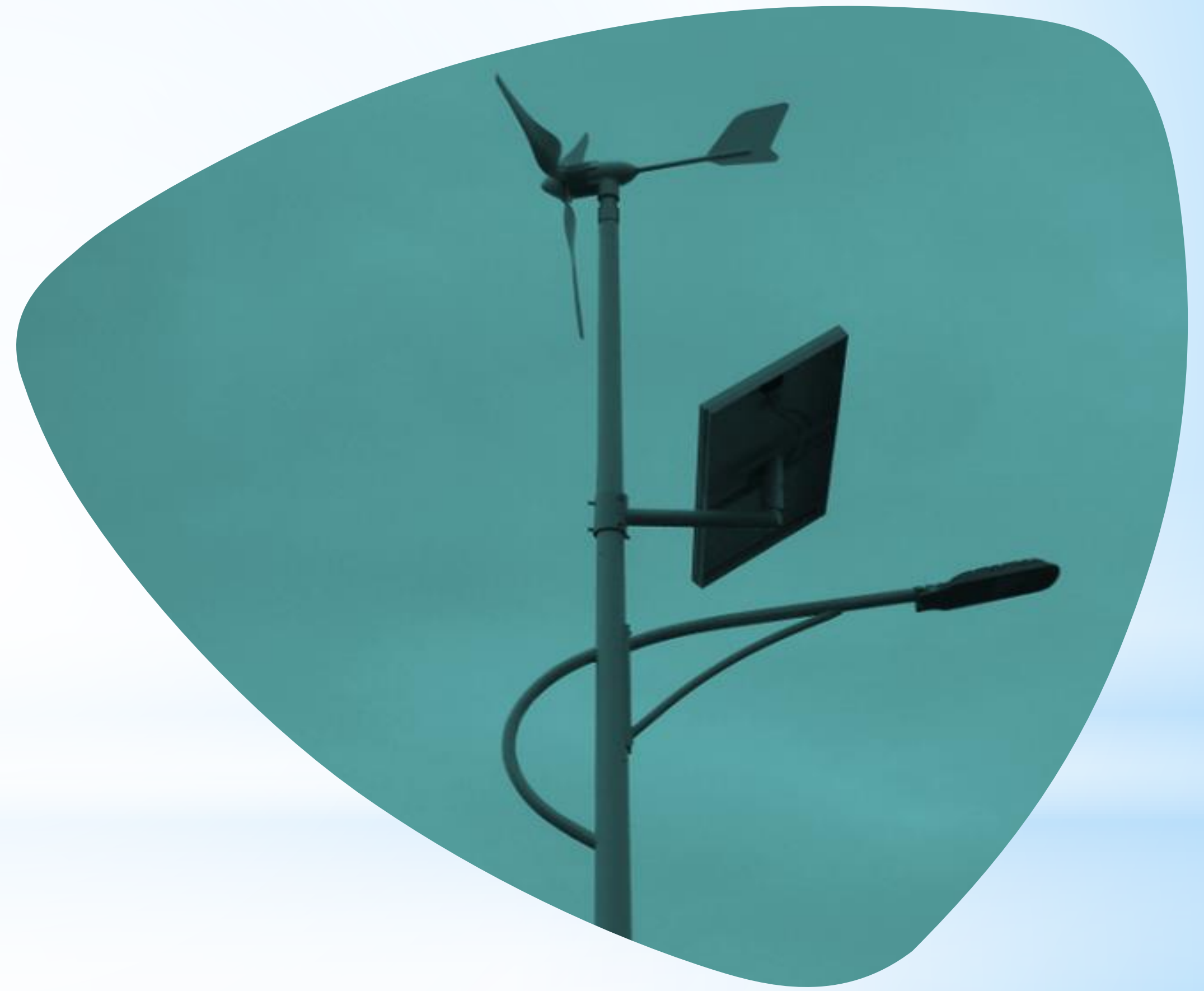


overcharge and over discharge prevention system.

The Technology



Lesimport works with the best LED units in the world /CREE/, imported from the primary manufacturer, with the electrical block modified for control and assembly in Bulgaria.



Advantages of **lesimport** Solar Street Light technology



Durable

works during
disasters & extreme
conditions due to the
lack of connection
with the electrical
grid

Cable Free

no construction above
and below ground
infrastructure for the
electrical grid or
between the street
lights

Independent

In case of
accident/vandalism
only the damaged
post is affected

Advantages of **lesimport** Solar Street Light technology



Fully Adjustable

The technical parameters can be modified to fit the specific needs of the project: geographical location, street type and dimensions, quantity of annual sunlight etc.

Advantages of **lesimport** Solar Street Light technology



Maintenance free

Once adjusted, the whole solar street post does not need ANY maintenance.

Remote Control

Remote control option for the grid connected units. On/off switch system.

Urban Environment Solution



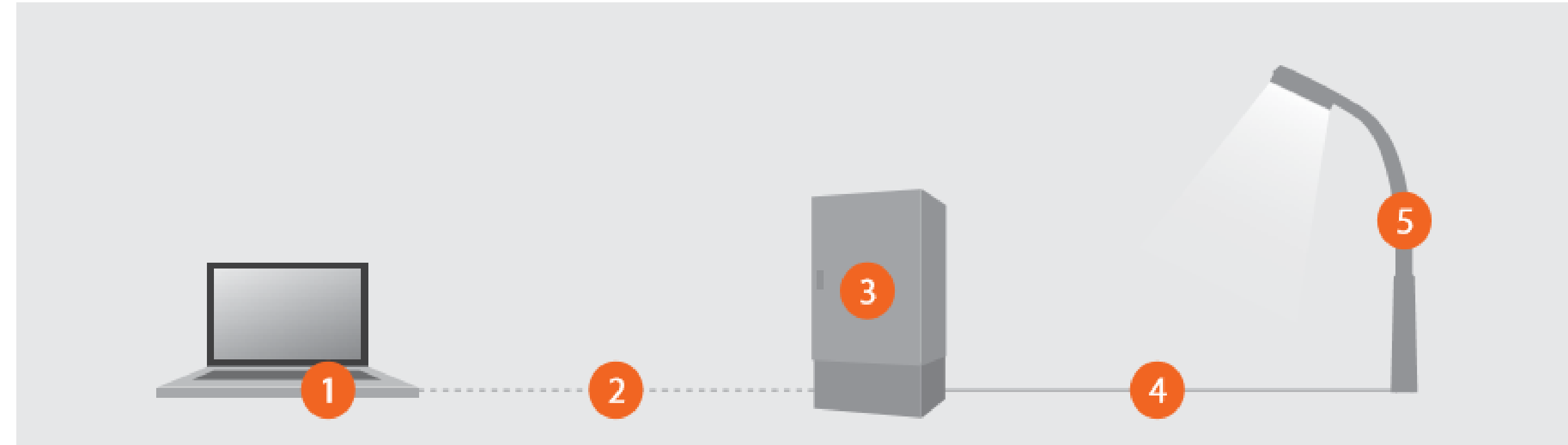
In highly dense urban locations with tall buildings, solar lighting is not recommended due to limited access of sunlight to the solar panel surface.

In such situation we offer LED units connected to the electrical grid. They are highly effective and very low energy consuming

Street light Control (SLC)



Everything quite simple: the system and its components



1. SLC software

The SLC software is the central interface for the user to the SLC system. It facilitates the administration, programming and analysis of the lighting installation. The SLC software can be installed locally or in the cloud. For each user only the allocated functional area is visible.

2. Internet protocol (IP)

The communication between the SLC software and SLC gateway at street level is via a secure IP connection by GPRS.

3. SLC gateway

The gateway, mounted in the field, e.g. in the switching cabinet, stores, processes and translates the control commands and polls initiated by the SLC software. Depending on the requirements, the SLC gateway can be used to incorporate a series of auxiliary components, such as meters, relays or light sensors in the overall system.

4. Easy Powerline Communication

The data is transmitted between the SLC gateway and the connected luminaires by means of a Easy Powerline Communication via the mains supply. An additional communication infrastructure, such as additional wiring or antennas is not necessary.

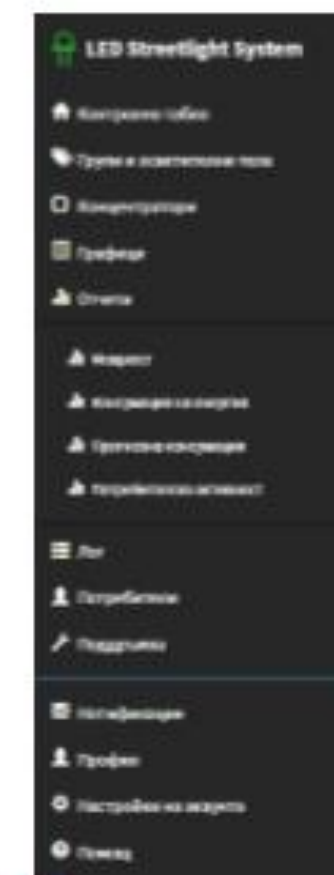
5. SLC-Luminaire Controller

The control elements in the SLC system allow group control and monitoring of each single group of luminaires. The components are available as pole mounting or luminaire mounting and facilitate group switching and dimming (via 1...10 V or PWM) of all the luminaires. In order to ensure optimum communication.

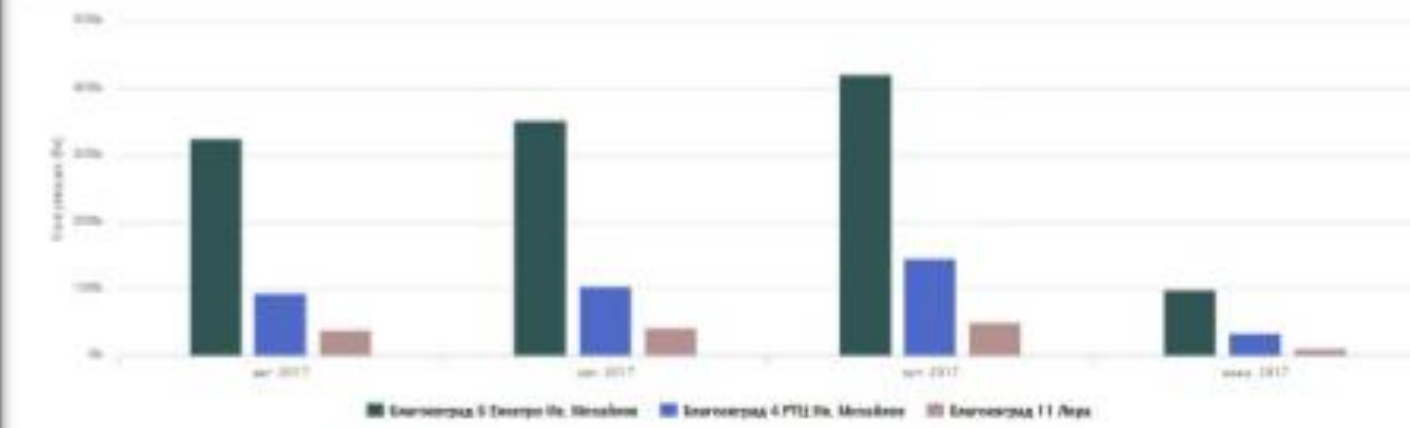
Street light Control (SLC)



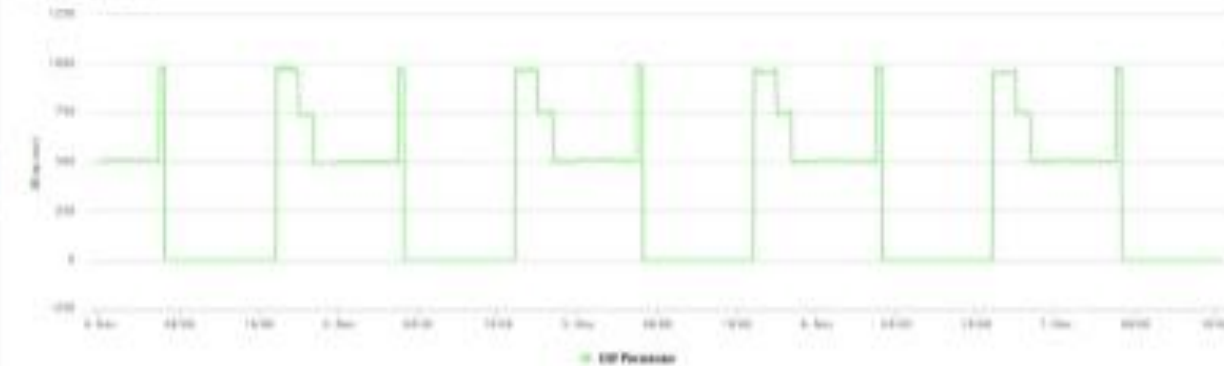
The SLC software is the central interface, where all the information is gathered and made available to the user. The entire system is represented clearly and can thus be easily controlled, administered and analyzed simply from a central location.



Консумация на энергия



Мощность



Лампы

Имя	Адрес	Статус	Состояние	Мощность	Энергия	Датум
Светильник 11-01	11-01	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-02	11-02	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-03	11-03	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-04	11-04	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-05	11-05	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-06	11-06	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-07	11-07	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-08	11-08	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-09	11-09	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-10	11-10	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-11	11-11	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-12	11-12	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-13	11-13	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-14	11-14	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-15	11-15	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-16	11-16	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-17	11-17	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-18	11-18	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-19	11-19	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
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Светильник 11-21	11-21	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-22	11-22	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-23	11-23	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
Светильник 11-24	11-24	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
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Светильник 11-27	11-27	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC
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Светильник 11-30	11-30	Вкл	Вкл	0.11	10000.00	2017-11-01 10:00:00 UTC



Control

The user has a wealth of possibilities for controlling the SLC: He can define the switching calendar for lighting groups and even stipulate exceptions during construction work or during holiday periods.

Analysis

The analysis function of the SLC software provides outstanding transparency and control. It automatically records the data of all system components and simplifies the creation of evaluations and visualizations. The individual analysis reports, e.g. the energy evaluations, are created and exported cyclically, and, if required sent by e-mail.

Administration

Thanks to the software, the scalability of the system and the individual light points is really easy: This permits, for example, flexible grouping of the luminaires, the best possible prediction of the need for maintenance by evaluation of the light source lifetime.

Go to settings to activate windows.



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