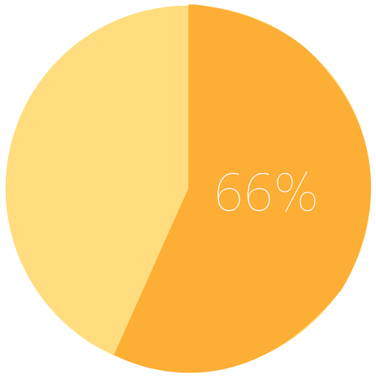
PHILIPS

Solar lighting

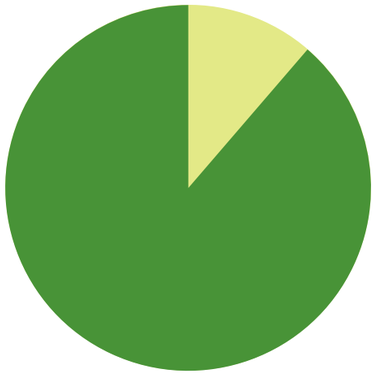
Rapid urbanization is fast depleting our resources

Rapid urbanization and population growth are putting more pressure on resources. This is reflected in the environmental impact of cities as they consume over two-thirds of the world's energy and account for more than 70% of global CO_2 emissions. Cities must now reduce their environmental impact.

On the other hand, more than 800 million people do not have access to an electricity grid. Darkness affects the quality of life at night and reduces public safety on roads and streets.



Energy consumption
by urban population



Total world population

8 billion

800 million without access to electricity grid

Solar lighting is **sustainable, green, and clean**

Off-grid solar street lighting delivers several benefits. While it alleviates people with no access to the grid, hybrid solar also covers large populations and gives them an opportunity to reduce their carbon footprint – thereby resulting in a greener and healthier world.

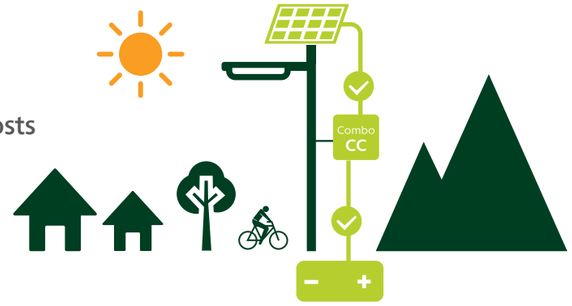
- Enhanced city sustainability potential
- No or minimal electricity costs
- Significant energy savings
- Safer. Reduced hazard risk with off-grid solar
- Increased sense of safety and security
- Low maintenance
- Less dependent on the power grid
- Improved city services
- More efficient city planning and operations
- Upgrade existing light points to hybrid solar with minimal costs
- Preserves landscape. No cabling or trenching in off-grid solar
- Enable the community to engage with data from the Internet of Things (IoT)

Our solar lighting propositions

Off-grid solar

• Saving cabling and distribution switchgear costs

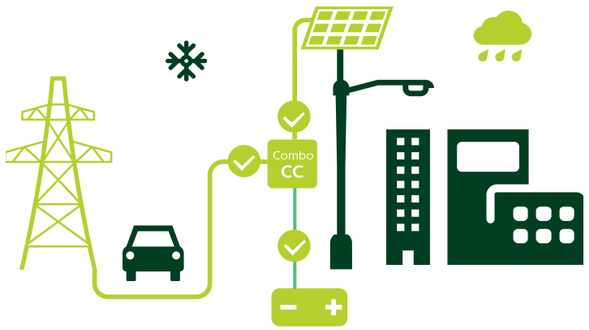
This system consists of luminaires, solar panels and batteries designed to operate autonomously without any connection with an electrical grid. The solar panels charge the batteries during the day and the stored energy powers the LEDs at night.



Hybrid solar

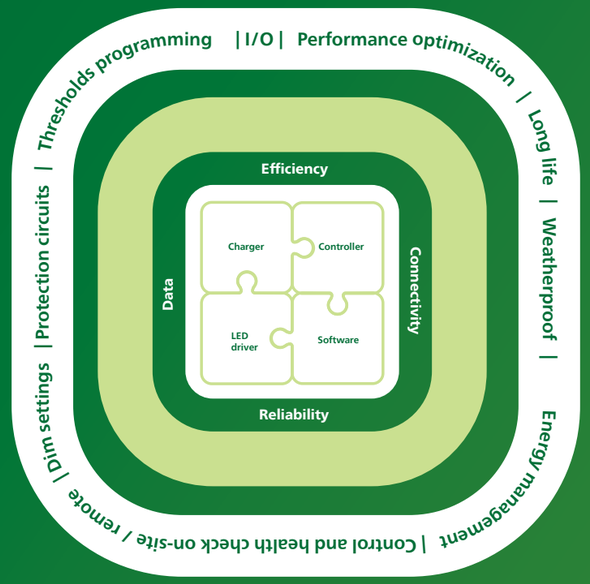
• For existing grid-connected light points

This system is like the off-grid solar system but is connected to a power grid. The solar panels charge the batteries during the day and the stored energy powers the LEDs at night. If the batteries run out of power, the LEDs are powered with energy drawn from the power grid.



Philips solar systems combine chargers, controllers, LED drivers and connectivity options on the same board.

Available in off-grid and hybrid architectures, the range comprises solar street lights and floodlights with a wide range of lumen outputs delivering best-in-class efficacy.



Reliable operations under diverse conditions

The quickest path to a **greener, smarter, more prosperous EU**

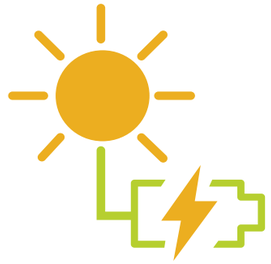
The European Green Deal, the world's most comprehensive climate action initiative, has been called "Europe's man on the moon moment."

The program's goals could not be more ambitious: to achieve a carbon-neutral continent by 2050, reconciling the economy and the way we consume resources with the planet, and making sure that nobody is left behind.

Our Green Switch program has been set up to show business owners and municipalities throughout the EU that our lighting solutions are a quick win, enabling fast action to be taken to help meet these ambitious goals.

Freddie Highmore

Clean energy with hybrid and solar street lighting



More than 75% of the EU's greenhouse gas emissions come from energy production and use. This means the EU must decarbonize its energy system to reach its climate objectives.

- Solar and hybrid street lighting minimize emissions and scale up the use of renewables
- Hybrid-solar technology uses clean solar-powered electricity when there is sunlight, and the mains grid when there is not
- 15 solar street lights save enough electricity to power an electric car or a household for one year

Infrastructure projects such as connected street lighting retrofits create on average 19 local jobs for every €1 million spent, benefitting the environment and the economy and building the digital platforms needed to ensure a green future.

Philips range of
solar lighting solutions

<5K lumens

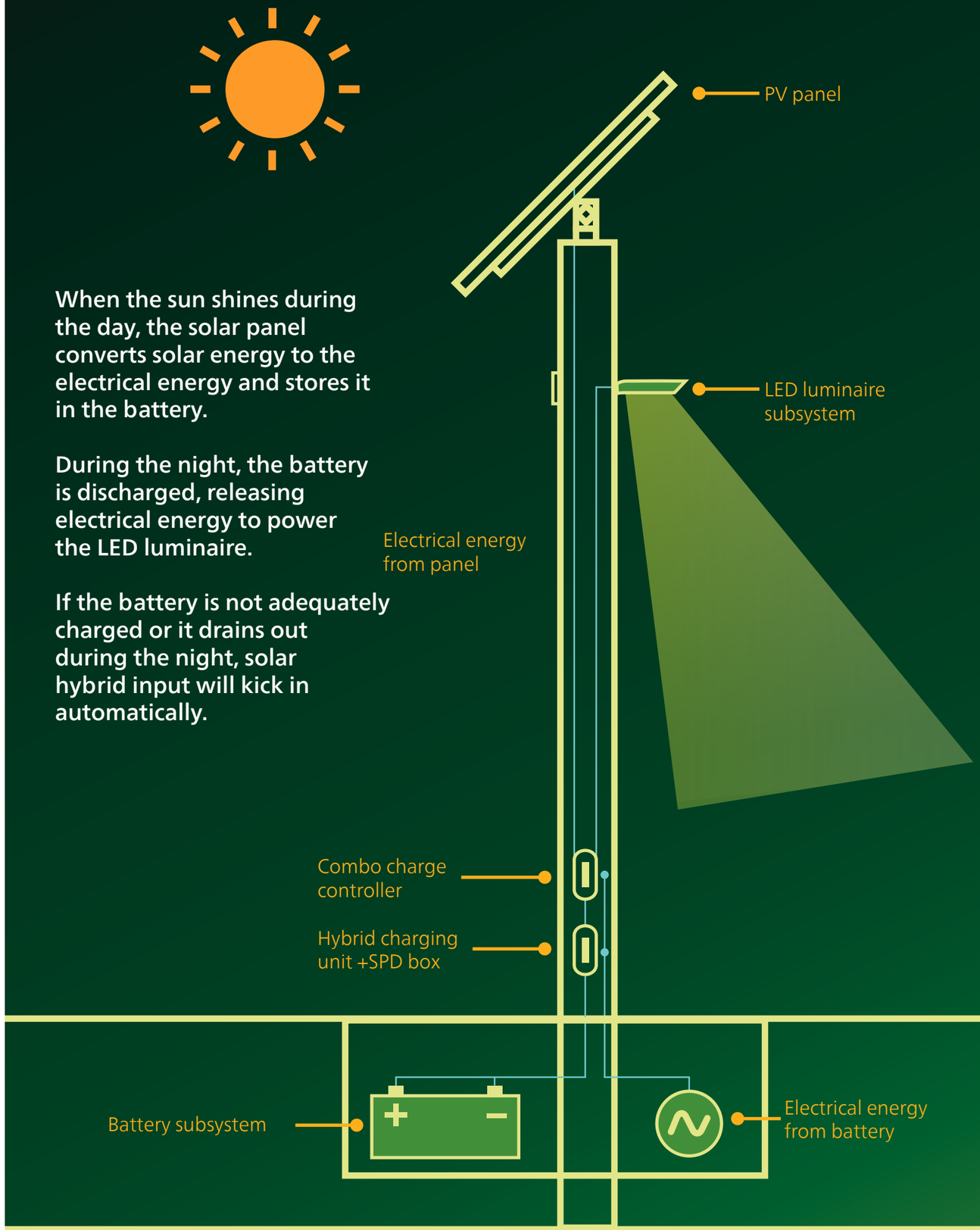
· Pathways
· Rural areas
· Parks

5K-8K lumens

· Parks
· Plazas
· Cycle tracks

8K-15K lumens

· Office campuses
· Suburban roads
· Inner city roads



Philips **outdoor luminaires**

SunStay Pro
All-in-one solar street lighting
500-10000 lumens

SunStay
All-in-one solar street lighting
2000-6000 lumens

LumiStreet gen2 Solar
Solar street light
2000-15000 lumens

Luma gen2 Solar
Solar street lighting
2000-15000 lumens

CitySoul LED gen2 Solar
Solar urban lighting
2000-15000 lumens

Villa LED gen2 Solar
Solar urban lighting
2000-5000 lumens

TownTune Asymmetric Solar
Solar urban lighting
2000-5000 lumens

CoreLine tempo Solar
Solar floodlighting
2000-15000 lumens

Solar subsystems

PV panel subsystems
- for 12V and 24V systems
- 30Wp-325Wp flat panel
- 100-190Wp vertical panel

Battery subsystems
In-ground gel batteries
- 12V and 24V
- 65-250Ah
- 800 cycles at 70% DOD
- IP68 rated

In-ground $LiFePO_4$ batteries
- 12.8V and 25.6V
- 50-180Ah
- 2000 cycles at 90% DOD
- IP68 rated

Combo CC Gen4.0
- 200Wp, 400Wp and 600Wp versions
- Support Gel and $LiFePO_4$ batteries
- Off-grid and hybrid solar

Cables and connectors
- Waterproof IP67 connectors
- Plug and play, easy installation
- Error-proof to avoid the mistake of onsite installation
- Different length of cables are available for various applications

www.lighting.philips.com/main/products/solar

www.signify.com/global/sustainability/sustainable-lighting/solar